

P-Channel 60 V (D-S) MOSFET

PRODUCT SUMMARY				
V _{DS} (V)	R _{DS(on)} (Ω)	I _D (A)		
- 60	0.020 at V _{GS} = - 10 V	- 50		
- 00	0.025 at V _{GS} = - 4.5 V	- 45		

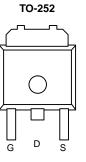
FEATURES

- TrenchFET[®] Power MOSFET
- Material categorization:



APPLICATIONS

· Load Switch



Top View

G

P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T	$_{\rm A}$ = 25 °C, unless othe	rwise noted)			
Parameter	Symbol	Limit	Unit		
Drain-Source Voltage	V _{DS}	- 60	V		
Gate-Source Voltage	V _{GS}	± 20	v		
Continuous Drain Current ($T_1 = 175 ^{\circ}C$)	T _C = 25 °C		- 50		
Continuous Drain Current (1j = 175°C)	T _C = 125 °C	Ι _D	- 40	^	
Pulsed Drain Current	I _{DM}	- 160	A		
Avalanche Current	I _{AS}	- 50			
Single Pulse Avalanche Energy ^a	L = 0.1 mH	E _{AS}	125	mJ	
Power Dissipation	T _C = 25 °C	PD	113 ^c	W	
	T _A = 25 °C	۰D	2.5 ^{b, c}		
Operating Junction and Storage Temperature Range		T _J , T _{stg}	- 55 to 150	°C	

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typical	Maximum	Unit
hunding to Ambient	t ≤ 10 s	P	15	18	°C/W
Junction-to-Ambient ^D	Steady State	R _{thJA}	40	50	
Junction-to-Case		R _{thJC}	0.82	1.1	

Notes:

a. Duty cycle \leq 1 %.

b. When mounted on 1" square PCB (FR-4 material).

c. See SOA curve for voltage derating.

d. Package limited.

$\begin{array}{ c c c c c } \hline Parameter & Symbol & Test Conditions & Min. Typ. Max. Uni \\ \hline Static & & & & & & & & & & & & & & & & & & &$	SPECIFICATIONS ($T_J = 25$	°C, unless o	otherwise noted)					
$\begin{array}{ c c c c } \hline Drain-Source Breakdown Voltage V_{DS} & V_{GS} = 0 V, I_D = -250 \ \mu A & -60 & & & V\\ \hline Gate Threshold Voltage $V_{OS}(m)$ & V_{DS} = V_{GS}, I_D = -250 \ \mu A & -1.5 & -3 & V\\ \hline Gate Threshold Voltage $V_{OS}(m)$ & V_{DS} = 0 V, V_{GS} = ± 20 V & & \pm 100 & nA & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{CS} = 0 V & -1 & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{CS} = 0 V & -1 & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{CS} = 0 V & -1 & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{CS} = 0 V & -50 & & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{TJ} = 125 \ ^{\circ}C & & -100 & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{TJ} = 150 \ ^{\circ}C & & -100 & & \\ \hline V_{DS} = -60 V, V_{GS} = 0 V & V_{TJ} = 150 \ ^{\circ}C & & -100 & & \\ \hline P_{OS} = -60 V, V_{OS} = 0 V & V_{TJ} = 125 \ ^{\circ}C & & -100 & & \\ \hline P_{OS} = -60 V, V_{OS} = 0 V & V_{TJ} = 125 \ ^{\circ}C & & -100 & & \\ \hline P_{OS} = -60 V, V_{OS} = -10 V & -50 & & & \\ \hline D_{On-State Drain Current $^{\circ}} & & \\ \hline P_{OS} = -10 V, I_{D} = -40 A, T_{J} = 125 \ ^{\circ}C & & 0.030 & & \\ \hline V_{OS} = -10 V, I_{D} = -40 A, T_{J} = 125 \ ^{\circ}C & & 0.030 & & \\ \hline V_{OS} = -10 V, I_{D} = -40 A, T_{J} = 125 \ ^{\circ}C & & 0.030 & & \\ \hline V_{OS} = -10 V, I_{D} = -40 A, T_{J} = 125 \ ^{\circ}C & & 0.030 & & \\ \hline D_{On-State Resistance $^{\circ}} & & \\ \hline P_{OS} = -10 V, I_{D} = -17 A & & 61 & & \\ \hline S \\ \hline Dupunc Capacitance & C_{ISS} & & \\ \hline D_{VS} = -15 V, I_{D} = -17 A & & 61 & & \\ \hline S \\ \hline Duput Capacitance & C_{ISS} & & \\ \hline D_{VS} = -0 V, V_{DS} = -25 V, f = 1 \ MHz & & & \\ \hline 3 & 305 & & & \\ \hline D_{Ca} = 0 V, V_{DS} = -25 V, f = 1 \ MHz & & & \\ \hline S \\ \hline Cate-Drain Charge^{C} & Q_{gd} & & \\ \hline D_{D} = -30 V, V_{CS} = -10 V, I_{D} = -40 A & \\ \hline D_{D} = -30 V, V_{CS} = -10 V, I_{D} = -40 A & \\ \hline D \\ \hline D = -40 A, V_{CS} = -10 V, R_{C} = 6 \ & \\ \hline D \\ \hline D = -40 A, V_{CS} = -10 V, R_{C} = 6 \ & \\ \hline D \\ \hline D = -40 A, V_{CS} = 0 V & & \\ \hline \hline D \\ \hline S \\ \hline C \\ \hline C \\ \hline C \\ \hline D \\ \hline C $	Parameter	1		Min.	Тур.	Max.	Unit	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Static							
$ \begin{array}{c c c c c c c } \hline Gate Threshold Voltage & V_{GS}(m) & V_{DS} = V_{GS}, n = -250 \ \mu A & -1.5 & -3 \\ \hline Gate-Body Leakage & I_{QSS} & V_{DS} = 0 \ V, V_{QS} = 20 \ V & & \pm 100 & nA \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V & V_{QS} = 0 \ V \\ \hline V_{DS} = -60 \ V, V_{QS} = 0 \ V \ V_{QS} = 0 \ V \ V_{QS} = 0 \ V \ V_{QS} = -10 \ V \ I_{D} = -17 \ A \\ \hline 0.020 \ \hline V_{QS} = -10 \ V, I_{D} = -40 \ A, \ T_{J} = 125 \ C \\ \hline 0.030 \ \hline V_{QS} = -10 \ V, I_{D} = -40 \ A, \ T_{J} = 125 \ C \\ \hline 0.030 \ \hline V_{QS} = -10 \ V, I_{D} = -40 \ A, \ T_{J} = 150 \ C \\ \hline 0.030 \ \hline V_{QS} = -10 \ V, I_{D} = -14 \ A \\ \hline 0.020 \ \hline V_{QS} = -10 \ V, I_{D} = -14 \ A \\ \hline 0.020 \ \hline V_{QS} = -10 \ V, I_{D} = -14 \ A \\ \hline 0.020 \ \hline \\ \hline 0.030 \ \hline \\ \hline 0.0000 \ \hline \\ 0.0000 \ \hline \\ \hline 0.0000 \ \hline \\ \hline 0.0000 \ \hline \\ 0.00$	Drain-Source Breakdown Voltage	V _{DS}	$V_{GS} = 0 V, I_D = -250 \mu A$	- 60			V	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Gate Threshold Voltage	V _{GS(th)}	$V_{DS} = V_{GS}$, $I_D = -250 \ \mu A$	- 1.5		- 3		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Gate-Body Leakage	I _{GSS}	$V_{DS} = 0 \text{ V}, V_{GS} = \pm 20 \text{ V}$			± 100	nA	
$ \begin{array}{ c c c c c c c } \hline V_{DS} = -60 \ V, \ V_{GS} = 0 \ V, \ V_{GS} = 0 \ V, \ V_{GS} = -10 \ V \\ \hline V_{DS} = -5 \ V, \ V_{GS} = -10 \ V \\ \hline V_{DS} = -5 \ V, \ V_{GS} = -10 \ V \\ \hline V_{DS} = -50 \ V \\ \hline V_{CS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 125 \ ^{\circ}{\rm C} \\ \hline 0.030 \ & \hline \\ \hline V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 125 \ ^{\circ}{\rm C} \\ \hline 0.030 \ & \hline \\ \hline V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 150 \ ^{\circ}{\rm C} \\ \hline 0.035 \ & \hline \\ \hline V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 150 \ ^{\circ}{\rm C} \\ \hline 0.035 \ & \hline \\ \hline V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 150 \ ^{\circ}{\rm C} \\ \hline 0.035 \ & \hline \\ \hline \hline \\ \hline Porward \ Transconductance^{a} \ g_{fs} \ V_{DS} = -15 \ V, \ I_{D} = -14 \ A \\ \hline 0.025 \ & \hline \\ \hline \hline \\ Porward \ Transconductance \ & C_{iss} \\ \hline \hline Pormaric^{b} \ & \hline \\ \hline \hline Pormaric^{b} \ & \hline \\ \hline \hline Pormaric^{b} \ & \hline \\ \hline \hline Pormaric^{b} \ & \hline \\ \hline \hline Pormaric^{b} \ & \hline \\ \hline Pormaric^{b} \ & \hline \\ \hline Pormaric^{b} \ & \hline \\ \hline \hline \hline Pormaric^{$			50 00			- 1		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Zero Gate Voltage Drain Current	I _{DSS}				- 50	μA	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$						- 100	μΑ Α Ω S	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	On-State Drain Current ^a	I _{D(on)}	$V_{DS} = -5 V, V_{GS} = -10 V$	- 50			А	
$ \begin{array}{ c c c c c c c } \hline \mbox{Prime}^{O} & \mbox{P}_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ T_{J} = 150 \ ^{\circ}{\rm C} & 0.035 & &$			V _{GS} = - 10 V, I _D = - 17 A		0.020			
$ \begin{array}{ c c c c c c } \hline V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ I_{J} = 10 \ C & 0.035 & 0 \\ \hline V_{GS} = -10 \ V, \ I_{D} = -14 \ A & 0.025 & 0 \\ \hline V_{GS} = -4.5 \ V, \ I_{D} = -14 \ A & 0.025 & 0 \\ \hline Dynamic^{b} & 0 & 0 \\ \hline Dynamic^{b} & 0 & 0 \\ \hline Duput Capacitance & C_{iss} & 0 & 0 \\ \hline Output Capacitance & C_{oss} & V_{GS} = -15 \ V, \ I_{D} = -17 \ A & 61 & S \\ \hline Dynamic^{b} & 0 & 0 \\ \hline Output Capacitance & C_{oss} & V_{GS} = 0 \ V, \ V_{DS} = -25 \ V, \ f = 1 \ MHz & 380 & 0 \\ \hline Total \ Gate \ Charge^{c} & Q_{g} & 0 \\ \hline Total \ Gate \ Charge^{c} & Q_{gd} \\ \hline Total \ Gate \ Charge^{c} & Q_{gd} \\ \hline Turn-On \ Delay \ Time^{c} & t_{d(onf)} \\ \hline Turn-On \ Delay \ Time^{c} & t_{d(onf)} \\ \hline Turn-Of \ Delay \ Time^{c} & t_{d(onf)} \\ \hline Fall \ Time^{c} & t_{f} & 0 \\ \hline D_{D} = -30 \ V, \ V_{GS} = -10 \ V, \ I_{D} = -40 \ A, \ V_{GS} = 0 \\ \hline U_{DD} = -30 \ V, \ V_{BS} = -10 \ V, \ I_{D} = -40 \ A \\ \hline D_{DD} = -30 \ V, \ V_{CS} = 0 \\ \hline D_{DD} = -30 \ V, \ V_{CS} = 0 \\ \hline D_{DD} = -30 \ V, \ V_{CS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GEN} = -10 \ V, \ I_{D} = -40 \ A \\ \hline D_{DD} = -40 \ A, \ V_{GEN} = -10 \ V, \ I_{D} = -40 \ A \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = -40 \ A, \ V_{GS} = 0 \\ \hline D_{DD} = \\ $		P			0.030		0	
Forward Transconductance ^a g_{fs} $V_{DS} = -15$ V, $I_D = -17$ A 61 S Dynamic ^b Input Capacitance C_{iss} $V_{GS} = 0$ V, $V_{DS} = -25$ V, $f = 1$ MHz 2950 pF Output Capacitance C_{oss} $V_{GS} = 0$ V, $V_{DS} = -25$ V, $f = 1$ MHz 380 pF Reverse Transfer Capacitance C_{rss} $V_{GS} = 0$ V, $V_{DS} = -25$ V, $f = 1$ MHz 380 pF Total Gate Charge ^c Q_g $V_{DS} = -30$ V, $V_{GS} = -10$ V, $I_D = -40$ A 110 165 nC Gate-Drain Charge ^c Q_{gd} $V_{DS} = -30$ V, $V_{GS} = -10$ V, $I_D = -40$ A 110 165 nC Turn-On Delay Time ^c t_q $V_{DD} = -30$ V, $R_L = 0.6 \Omega$ 115 23 ns Source-Drain Diode Ratings and Characteristics $T_C = 25$ °C ^b $V_{DD} = -40$ A, $V_{GS} = 0$ V 175 260 Ns Source-Drain Diode Ratings and Characteristics $T_C = 25$ °C ^b -40 -40 A Pulsed Current I_S $I_F = -40$ A, $V_{GS} = 0$ V -1 -1.6 V	Drain-Source On-State Resistance ^a	™DS(on)	V _{GS} = - 10 V, I _D = - 40 A, T _J = 150 °C		0.035		Ω	
$ \begin{array}{c c c c c c c c c } \hline \textbf{Dynamic}^{b} & & & & & & & & & & & & & & & & & & &$			V _{GS} = - 4.5 V, I _D = - 14 A		0.025			
$ \begin{array}{c c c c c c c c c } \hline Input Capacitance & C_{iss} \\ \hline Output Capacitance & C_{oss} \\ \hline Reverse Transfer Capacitance & C_{rss} \\ \hline Total Gate Charge^c & Q_g \\ \hline Gate-Source Charge^c & Q_{gd} \\ \hline Turn-On Delay Time^c & t_{d(on)} \\ \hline Rise Time^c & t_r \\ \hline Turn-Off Delay Time^c & t_{d(off)} \\ \hline Fall Time^c & t_f \\ \hline Source-Drain Diode Ratings and Characteristics T_C = 25 \circ C^b \\ \hline Continuous Current & I_S \\ \hline Proward Voltage^a & V_{SD} & I_F = -40 \text{ A}, V_{GS} = 0 \text{ V} \\ \hline V_{SD} = -30 \text{ V}, V_{GS} = 0 \text{ V} \\ \hline Provent & Pro$	Forward Transconductance ^a	9 _{fs}	V _{DS} = - 15 V, I _D = - 17 A		61		S	
$ \begin{array}{c c c c c c c c c } \hline Output Capacitance & C_{oss} & V_{GS} = 0 \ V, \ V_{DS} = -25 \ V, \ f = 1 \ MHz & 380 & \\ \hline & 305 & \\ \hline & 100 & -10 & \\ \hline & 100 & \\ \hline & 100 & \\ \hline & 100 & & \\ \hline $	Dynamic ^b	•	•					
$ \begin{array}{c c c c c c c c c } \hline Reverse Transfer Capacitance & C_{rss} & & & & & & & & & & & & & & & & & & $	Input Capacitance	C _{iss}			2950			
$ \begin{array}{c c c c c c c } \hline Total Gate Charge^{C} & Q_{g} \\ \hline Gate-Source Charge^{C} & Q_{gs} \\ \hline Gate-Drain Charge^{C} & Q_{gd} \\ \hline Turn-On Delay Time^{C} & I_{d(on)} \\ \hline Rise Time^{C} & I_{r} \\ \hline Turn-Off Delay Time^{C} & I_{d(off)} \\ \hline Fall Time^{C} & I_{f} \\ \hline \hline Source-Drain Diode Ratings and Characteristics T_{C} = 25 \ ^{C}C^{b} \\ \hline \hline Continuous Current & I_{S} \\ \hline Pulsed Current & I_{SM} \\ \hline Forward Voltage^{a} & V_{SD} & I_{F} = -40 \ A, \ V_{GS} = 0 \ V \\ \hline \hline \end{array} $	Output Capacitance	C _{oss}	V_{GS} = 0 V, V_{DS} = - 25 V, f = 1 MHz		380		pF	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Reverse Transfer Capacitance	C _{rss}			305			
$ \begin{array}{c c c c c c c c c } \hline Gate-Drain Charge^c & Q_{gd} \\ \hline Turn-On Delay Time^c & t_{d(on)} \\ \hline Rise Time^c & t_r & \\ \hline Turn-Off Delay Time^c & t_{d(off)} \\ \hline Fall Time^c & t_f & \\ \hline \hline Source-Drain Diode Ratings and Characteristics T_C = 25 °C^b \\ \hline Continuous Current & I_S & \\ \hline Pulsed Current & I_{SM} & \\ \hline Forward Voltage^a & V_{SD} & I_F = -40 \text{ A}, V_{GS} = 0 \text{ V} & -1 & -1.6 & V \\ \hline \hline \hline 28 & \hline 28 & \hline \\ 20 & \hline \\ 28 & \hline \\ 28$	Total Gate Charge ^c	Qg			110	165		
$ \begin{array}{c c c c c c c c } \hline Turn-On \ Delay \ Time^{C} & t_{d(on)} \\ \hline Rise \ Time^{C} & t_{r} \\ \hline Turn-Off \ Delay \ Time^{C} & t_{d(off)} \\ \hline Turn-Off \ Delay \ Time^{C} & t_{d(off)} \\ \hline Fall \ Time^{C} & t_{f} \\ \hline \hline Source-Drain \ Diode \ Ratings \ and \ Characteristics \ T_{C} = 25 \ ^{\circ}C^{b} \\ \hline \hline Continuous \ Current & I_{S} & & & & & & & & & & & & & & & \\ \hline Pulsed \ Current & I_{SM} & & & & & & & & & & & & & & & & & & &$	Gate-Source Charge ^c	Q _{gs}	$V_{DS} = -30 \text{ V}, V_{GS} = -10 \text{ V}, I_{D} = -40 \text{ A}$		19		nC	
$\begin{array}{c c c c c c c c } \hline Rise Time^{C} & t_{r} \\ \hline Turn-Off Delay Time^{C} & t_{d(off)} \\ \hline Tail Time^{C} & t_{f} \\ \hline Source-Drain Diode Ratings and Characteristics T_{C} = 25 \ ^{\circ}C^{b} \\ \hline Continuous Current & I_{S} \\ \hline Pulsed Current & I_{SM} \\ \hline Forward Voltage^{a} & V_{SD} \\ \hline V_{DD} = - 30 \ V, \ R_{L} = 0.6 \ \Omega \\ \hline V_{DD} = - 10 \ V, \ R_{G} = 6 \\ \hline \Omega & \hline T T 5 \\ \hline T T T 5 \\ \hline T T T 5 \\ \hline T 5 \\ \hline$	Gate-Drain Charge ^c	Q _{gd}			28		1	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Turn-On Delay Time ^c	t _{d(on)}			15	23		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Rise Time ^c	t _r	DD / L		70	105	ns	
Fail Time*If175260Source-Drain Diode Ratings and Characteristics $T_C = 25$ °CbContinuous CurrentIs-40Pulsed CurrentIs-80Forward Voltage ^a V _{SD} I _F = -40 A, V _{GS} = 0 V-1	Turn-Off Delay Time ^c	t _{d(off)}	$I_D \cong$ - 40 A, V_{GEN} = - 10 V, R_G = 6		175	260		
Continuous CurrentIs-40Pulsed CurrentIsm-80Forward Voltagea V_{SD} $I_F = -40 \text{ A}, V_{GS} = 0 \text{ V}$ -1	Fall Time ^c	t _f	Ω		175	260		
Pulsed CurrentI SM- 80AForward VoltageaV SDI F = - 40 A, V GS = 0 V- 1- 1.6V	Source-Drain Diode Ratings and Cha	aracteristics	T _C = 25 °C ^b					
Pulsed Current I _{SM} - 80 Forward Voltage ^a V _{SD} I _F = - 40 A, V _{GS} = 0 V - 1 - 1.6 V	Continuous Current	۱ _S				- 40	٨	
	Pulsed Current	I _{SM}				- 80	А	
Reverse Recovery Time t_{rr} $I_F = -40 \text{ A}, dl/dt = 100 \text{ A/}\mu\text{s}$ 4570ns	Forward Voltage ^a	V _{SD}	I _F = - 40 A, V _{GS} = 0 V		- 1	- 1.6	V	
	Reverse Recovery Time	t _{rr}	I _F = - 40 A, dl/dt = 100 A/μs		45	70	ns	

Notes:

a. Pulse test; pulse width \leq 300 µs, duty cycle \leq 2 %. b. Guaranteed by design, not subject to production testing.

c. Independent of operating temperature.

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

semi Bsemi.com



55 °C

3.5

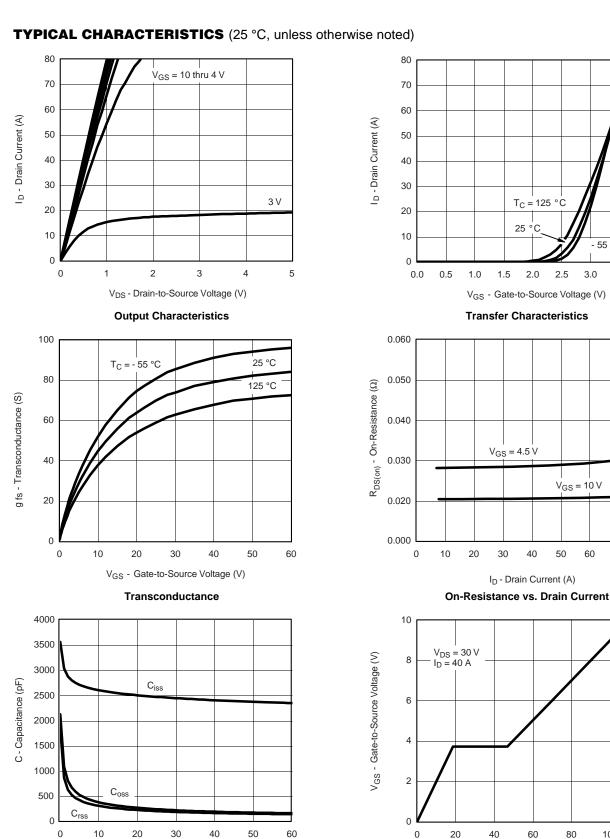
4.0

3.0

60

70

80



服务热线:400-655-8788

V_{DS} - Drain-to-Source Voltage (V)

Capacitance

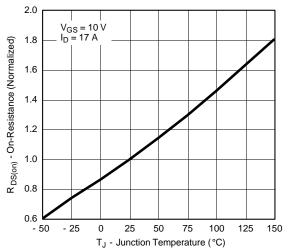
120

100

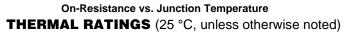
Qg - Total Gate Charge (nC)

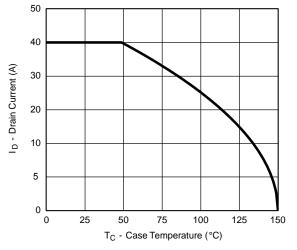
Gate Charge



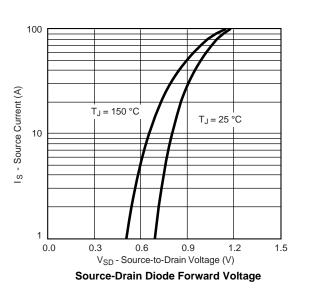


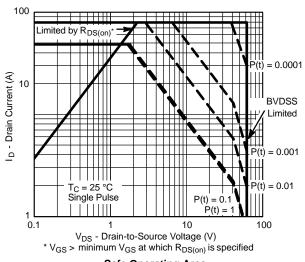
TYPICAL CHARACTERISTICS

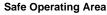


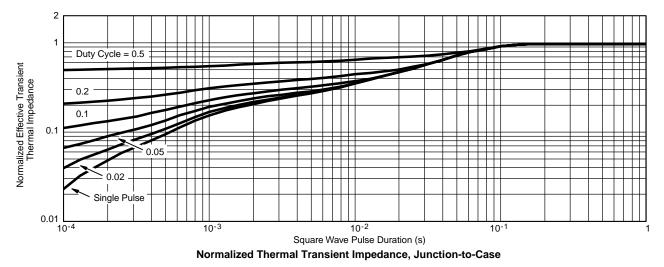


Drain Current vs. Case Temperature



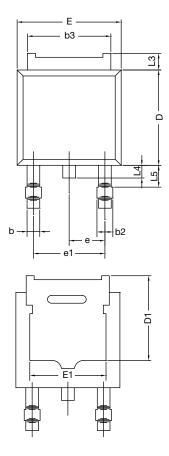








TO-252AA CASE OUTLINE





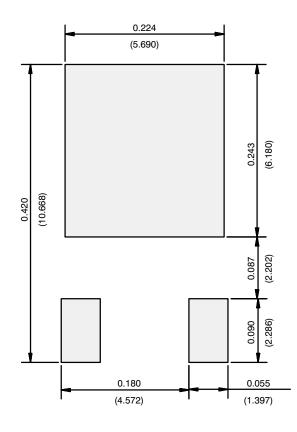
	MILLIN	IETERS	INCHES			
DIM.	MIN.	MAX.	MIN.	MAX.		
А	2.18	2.38	0.086	0.094		
A1	-	0.127	-	0.005		
b	0.64	0.88	0.025	0.035		
b2	0.76	1.14	0.030	0.045		
b3	4.95	5.46	0.195	0.215		
С	0.46	0.61	0.018	0.024		
C2	0.46	0.89	0.018	0.035		
D	5.97	6.22	0.235	0.245		
D1	5.21	-	0.205	-		
Е	6.35	6.73	0.250	0.265		
E1	4.32	-	0.170	-		
Н	9.40	10.41	0.370	0.410		
е	2.28	BSC	0.090 BSC			
e1	4.56	BSC	0.180 BSC			
L	1.40	1.78	0.055	0.070		
L3	0.89	1.27	0.035	0.050		
L4	-	1.02	-	0.040		
L5	1.14	1.52	0.045	0.060		
ECN: X12- DWG: 534	0247-Rev. M, 7	24-Dec-12				

Note

• Dimension L3 is for reference only.



RECOMMENDED MINIMUM PADS FOR DPAK (TO-252)



Recommended Minimum Pads Dimensions in Inches/(mm)



Disclaimer

All products due to improve reliability, function or design or for other reasons, product specifications and data are subject to change without notice.

Taiwan VBsemi Electronics Co., Ltd., branches, agents, employees, and all persons acting on its or their representatives (collectively, the "Taiwan VBsemi"), assumes no responsibility for any errors, inaccuracies or incomplete data contained in the table or any other any disclosure of any information related to the product.(www.VBsemi.com)

Taiwan VBsemi makes no guarantee, representation or warranty on the product for any particular purpose of any goods or continuous production. To the maximum extent permitted by applicable law on Taiwan VBsemi relinquished: (1) any application and all liability arising out of or use of any products; (2) any and all liability, including but not limited to special, consequential damages or incidental; (3) any and all implied warranties, including a particular purpose, non-infringement and merchantability guarantee.

Statement on certain types of applications are based on knowledge of the product is often used in a typical application of the general product VBsemi Taiwan demand that the Taiwan VBsemi of. Statement on whether the product is suitable for a particular application is non-binding. It is the customer's responsibility to verify specific product features in the products described in the specification is appropriate for use in a particular application. Parameter data sheets and technical specifications can be provided may vary depending on the application and performance over time. All operating parameters, including typical parameters must be made by customer's technical experts validated for each customer application. Product specifications do not expand or modify Taiwan VBsemi purchasing terms and conditions, including but not limited to warranty herein.

Unless expressly stated in writing, Taiwan VBsemi products are not intended for use in medical, life saving, or life sustaining applications or any other application. Wherein VBsemi product failure could lead to personal injury or death, use or sale of products used in Taiwan VBsemi such applications using client did not express their own risk. Contact your authorized Taiwan VBsemi people who are related to product design applications and other terms and conditions in writing.

The information provided in this document and the company's products without a license, express or implied, by estoppel or otherwise, to any intellectual property rights granted to the VBsemi act or document. Product names and trademarks referred to herein are trademarks of their respective representatives will be all.

Material Category Policy

Taiwan VBsemi Electronics Co., Ltd., hereby certify that all of the products are determined to be RoHS compliant and meets the definition of restrictions under Directive of the European Parliament 2011/65 / EU, 2011 Nian. 6. 8 Ri Yue restrict the use of certain hazardous substances in electrical and electronic equipment (EEE) - modification, unless otherwise specified as inconsistent.(www.VBsemi.com)

Please note that some documents may still refer to Taiwan VBsemi RoHS Directive 2002/95 / EC. We confirm that all products identified as consistent with the Directive 2002/95 / EC European Directive 2011/65 /.

Taiwan VBsemi Electronics Co., Ltd. hereby certify that all of its products comply identified as halogen-free halogen-free standards required by the JEDEC JS709A. Please note that some Taiwanese VBsemi documents still refer to the definition of IEC 61249-2-21, and we are sure that all products conform to confirm compliance with IEC 61249-2-21 standard level JS709A.