

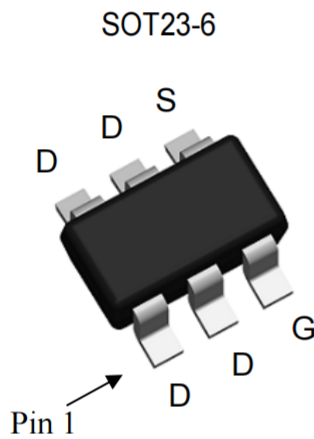
General Features

BV_{DSS}	-150V
$I_D @ V_{GS} = -10V, T_A = 25^\circ C$	-0.85A
$R_{DS(ON) typ. @ V_{GS} = -10V, I_D = -0.5A}$	0.8Ω

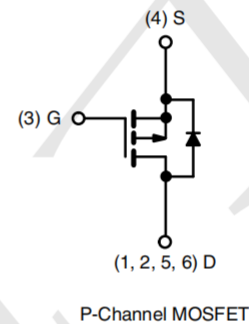
Application

- Low On Resistance
- Low Gate Charge
- Fast Switching Characteristic

Package and Pin Configuration



Block Diagram



Marking: EP15

Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Limits	Unit	
Drain-Source Voltage	V_{DS}	-150	V	
Gate-Source Voltage	V_{GS}	± 20		
Continuous Drain Current @ $V_{GS} = -10V, T_A = 25^\circ C$	I_D	-0.85	A	
Continuous Drain Current @ $V_{GS} = -10V, T_A = 70^\circ C$		-0.68		
Pulsed Drain Current		I_{DM}		-3.4
Continuous Body Diode Forward Current @ $T_A = 25^\circ C$	I_S	-0.85		
Total Power Dissipation	P_D	$T_A = 25^\circ C$	1.5	W
		$T_A = 70^\circ C$	1	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^\circ C$	

Thermal Data

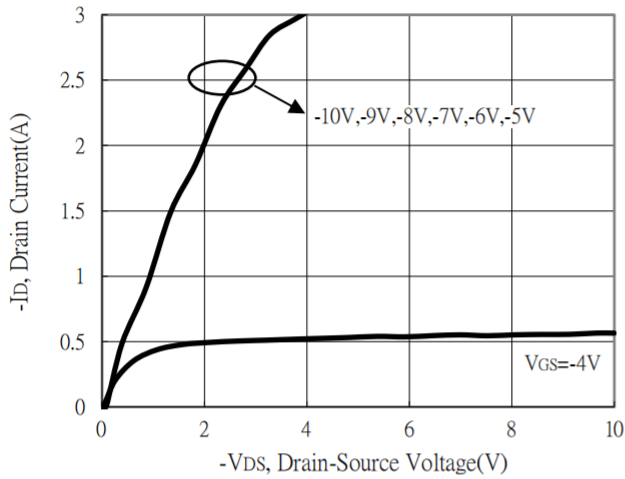
Parameter	Symbol	Steady State	Unit
Thermal Resistance, Junction-to-ambient	$R_{\theta JA}$	81	$^\circ C/W$

Electrical Characteristics (T_A=25°C, unless otherwise specified)

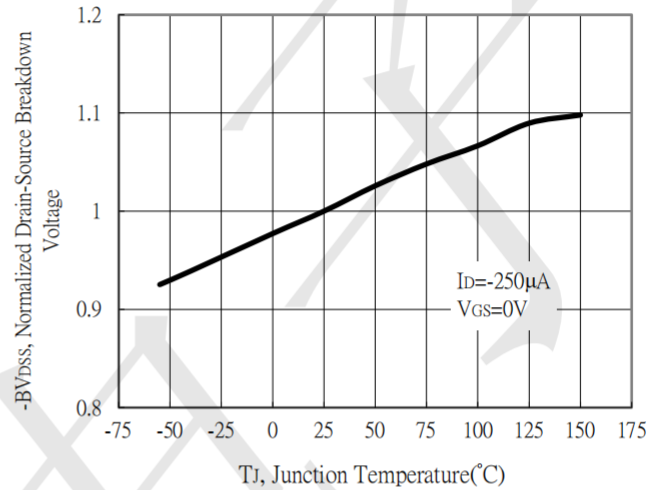
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS}	-150	-	-	V	V _{GS} =0V, I _D =-250μA
V _{GS(th)}	-2	-	-4		V _{DS} =V _{GS} , I _D =-250μA
G _{FS}	-	1.6	-	S	V _{DS} =-10V, I _D =-0.5A
I _{GSS}	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
I _{DSS}	-	-	-1	μA	V _{DS} =-120V, V _{GS} =0V
R _{DSON}	-	0.8	1.05	Ω	V _{GS} =-10V, I _D =-0.5A
Dynamic					
C _{iss}	-	280	-	pF	V _{DS} =-75V, V _{GS} =0V, f=1MHz
C _{oss}	-	20	-		
C _{rss}	-	14	-		
R _g	-	5.7	-	Ω	f=1MHz
Q _g *1,2	-	6.9	-	nC	V _{DS} =-75V, I _D =-0.5A, V _{GS} =-10V
Q _{gs} *1,2	-	1.5	-		
Q _{gd} *1,2	-	1.8	-		
t _{d(ON)} *1,2	-	7	-	ns	V _{DS} =-75V, I _D =-0.5A, V _{GS} =-10V, R _G =6Ω
t _r *1,2	-	17	-		
t _{d(OFF)} *1,2	-	18	-		
t _f *1,2	-	18	-		
Source-Drain Diode					
V _{SD} *1	-	-0.77	-1.2	V	I _S =-0.5A, V _{GS} =0V
t _{rr}	-	27	-	ns	I _F =-0.5A, dI _F /dt=100A/μs
Q _{rr}	-	25	-	nC	

Typical Characteristics

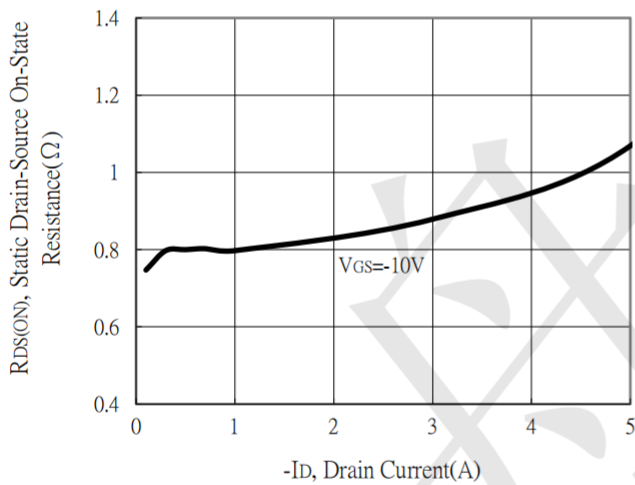
Typical Output Characteristics



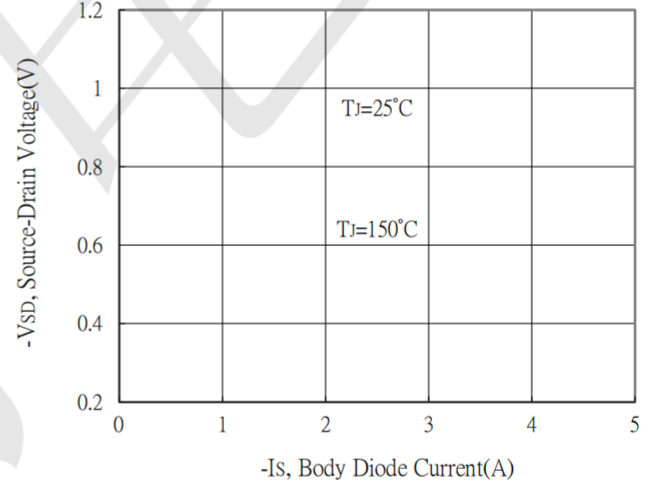
Breakdown Voltage vs Ambient Temperature



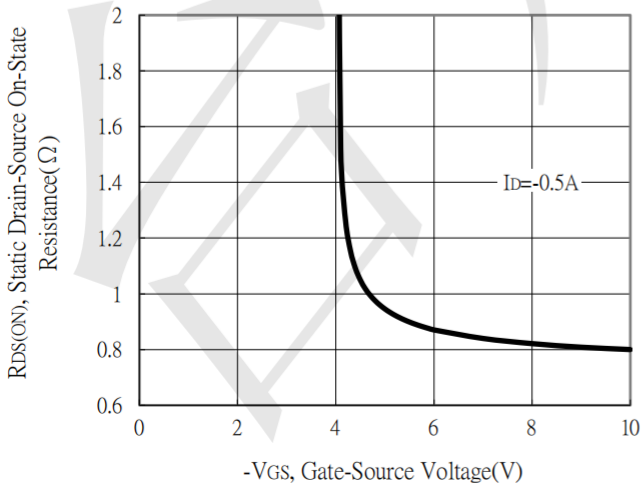
Static Drain-Source On-State resistance vs Drain Current



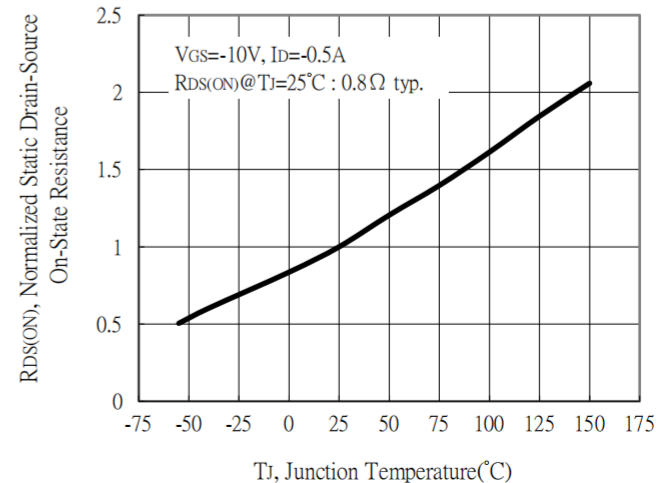
Body Diode Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage

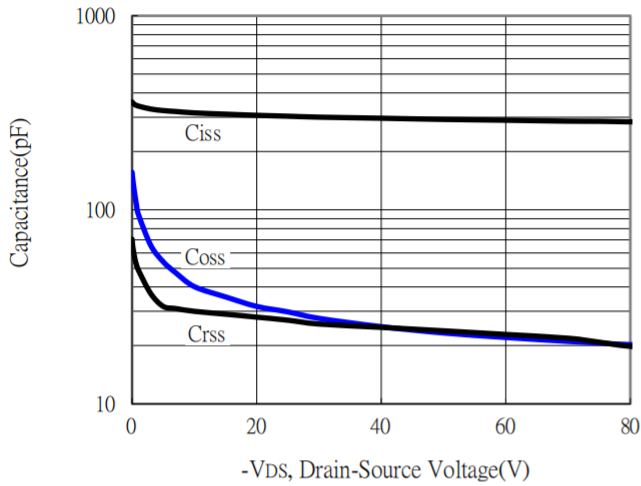


Drain-Source On-State Resistance vs Junction Temperature

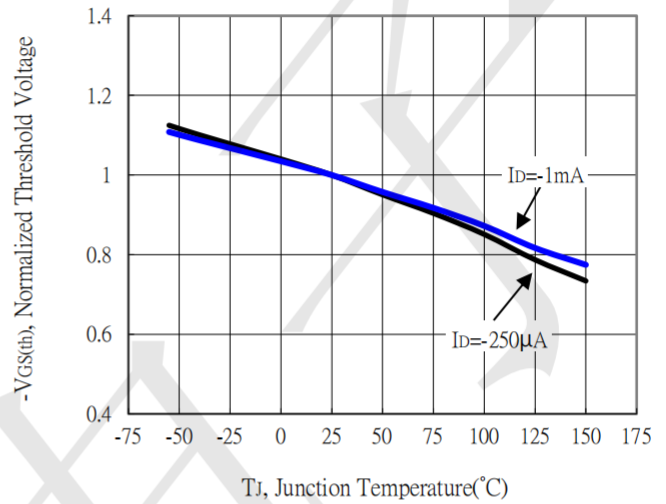


Typical Characteristics (Cont.)

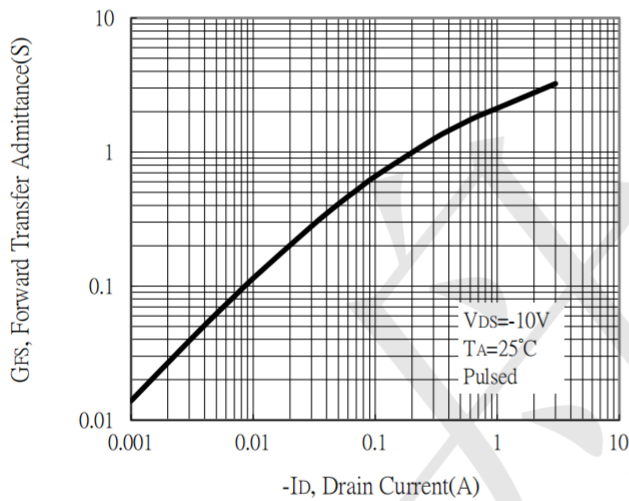
Capacitance vs Drain-to-Source Voltage



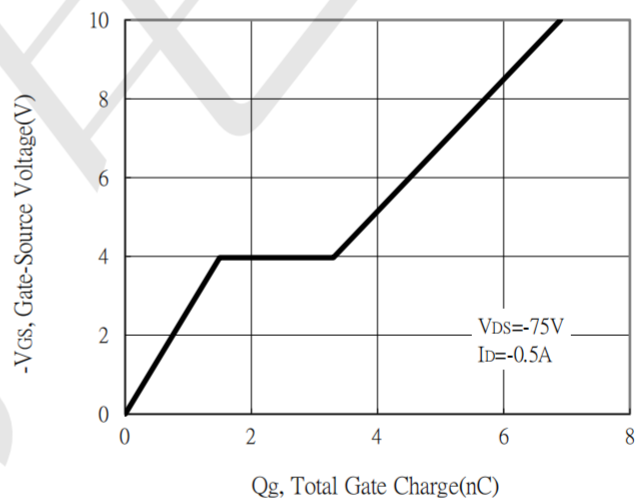
Threshold Voltage vs Junction Temperature



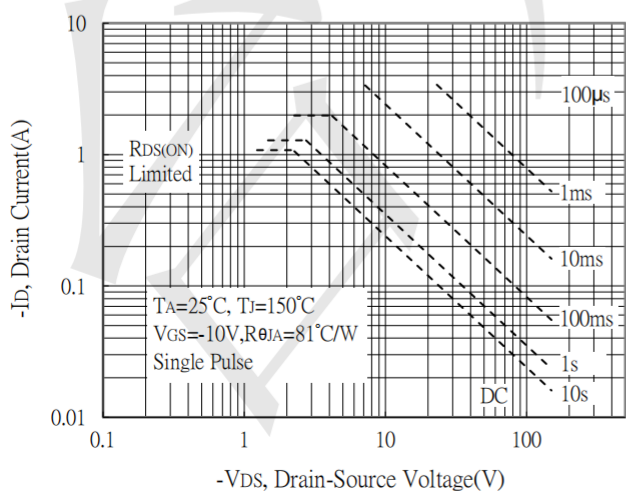
Forward Transfer Admittance vs Drain Current



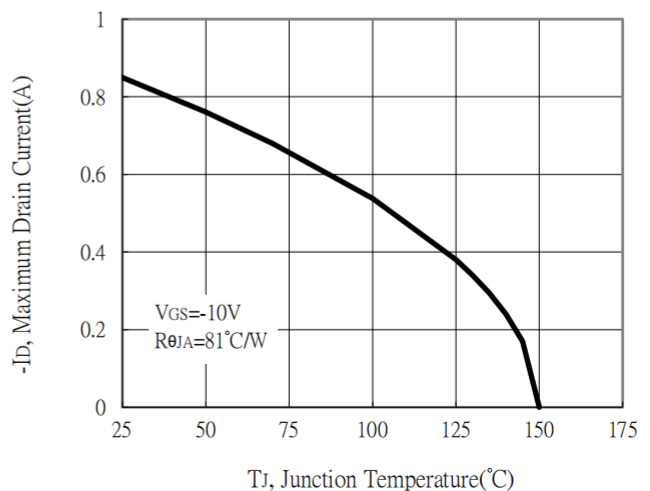
Gate Charge Characteristics



Maximum Safe Operating Area

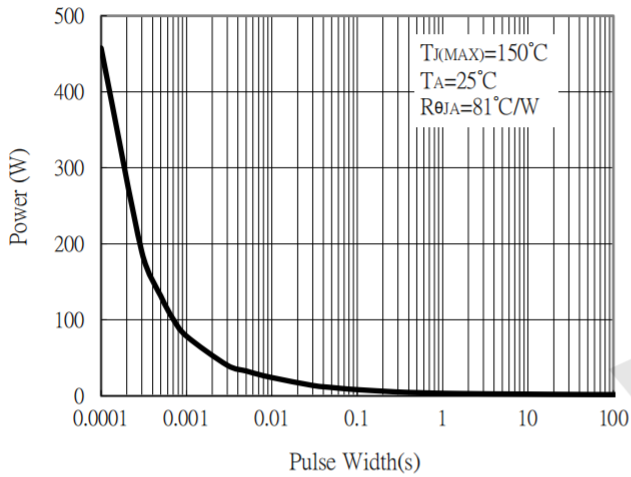


Maximum Drain Current vs Junction Temperature

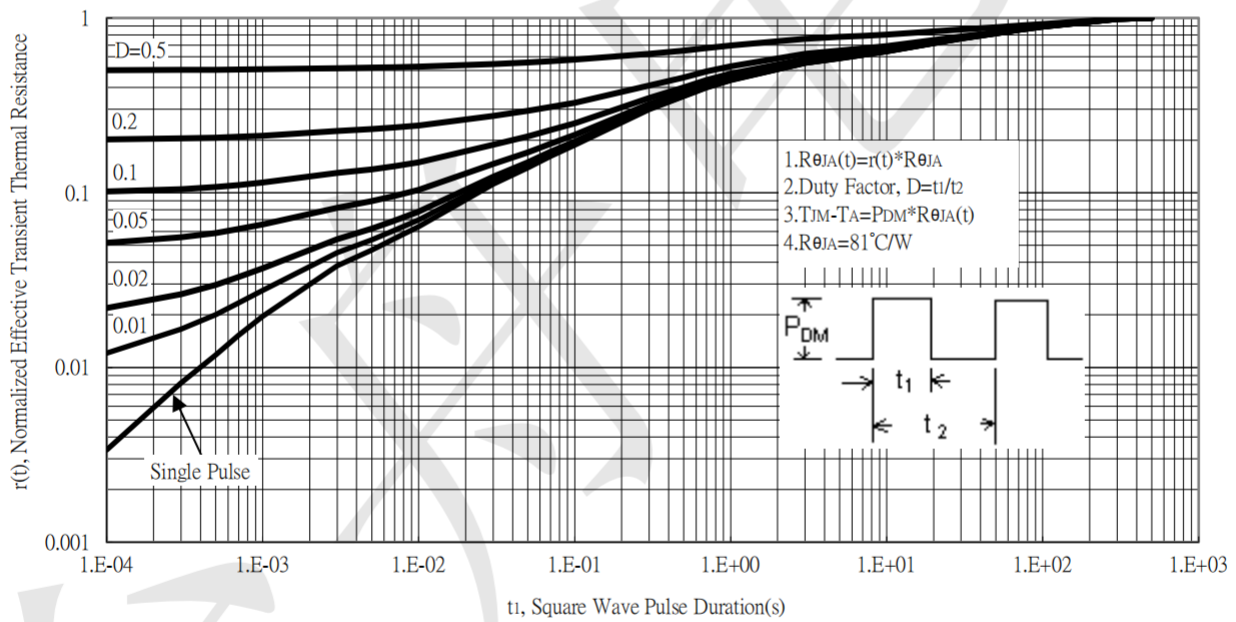


Typical Characteristics (Cont.)

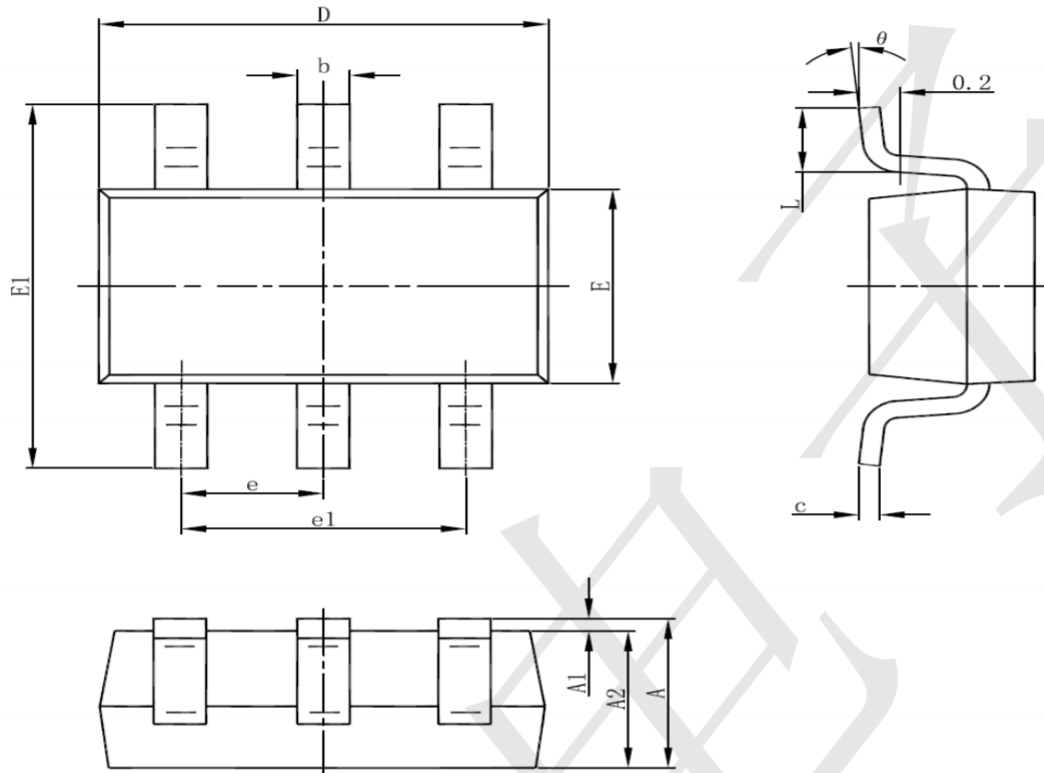
Single Pulse Power Rating, Junction to Ambient



Transient Thermal Response Curves



SOT23-6 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°