

Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 300 V

Forward Current - 20 A



FEATURES

- ◆ Very low forward voltage
- ◆ High current capability
- ◆ High forward surge capability
- ◆ Low power losses · High efficiency
- ◆ Guarding for over voltage protection
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: TO-220AB/CT TO-220F/FCT TO-263/DC
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106



Primary Characteristic

I_o	2*10A
V_{RRM}	300V
I_{FSM}	180A
V_F	0.75V
$T_J \text{ Max}$	175°C

Maximum Ratings (Per Leg) at $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	300	V
Maximum RMS voltage	V_{RMS}	300	V
Maximum DC Blocking Voltage	V_{DC}	300	V
Maximum Average Forward Rectified Current	Per Leg	10	A
	Total	20	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	I_{FSM}	180	A
Operating Temperature Range	T_J	-50 ~ +175	°C
Storage Temperature Range	T_{STG}	-50 ~ +175	°C
Typical Thermal Resistance (Note1) TO-220AB, TO-263 TO-220F	$R_{\theta JA} / R_{\theta JC}$	2/4	°C/W

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics	Symbols	Value		Units		
		Typ	Max			
Forward Voltage Drop(Note2) at $I_F=3A$	V_F	TA=25°C	0.75	0.82	V	
		TA=125°C	0.63	-		
		at $I_F=5A$	TA=25°C	0.80		0.84
			TA=125°C	0.67		-
		at $I_F=10A$	TA=25°C	0.87		0.90
			TA=125°C	0.75		-
Maximum Reverse Current at $V_R=300V$	I_R	TA=25°C	0.2	1	uA	
		TA=125°C	5	-	mA	

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

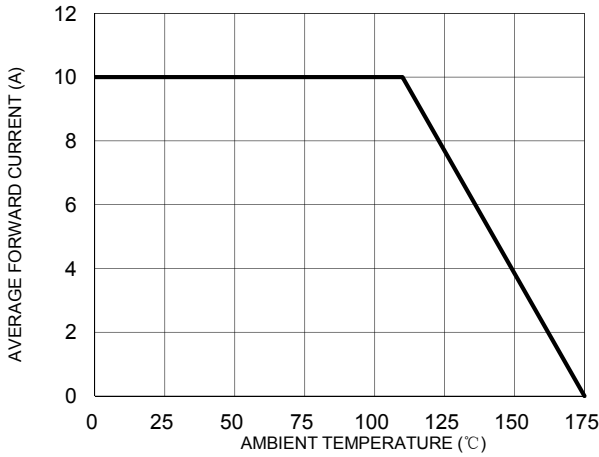


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

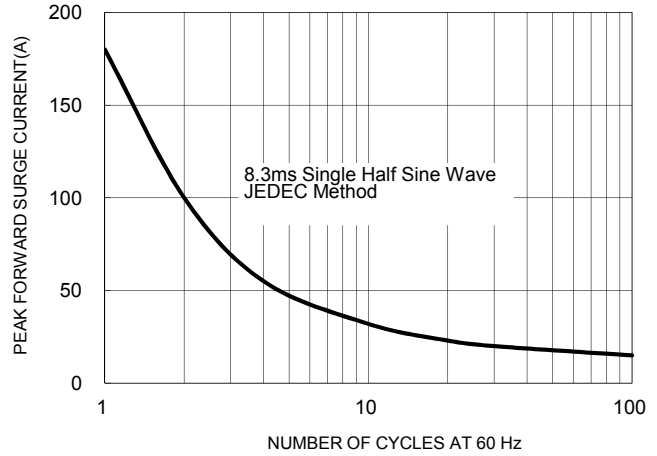


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

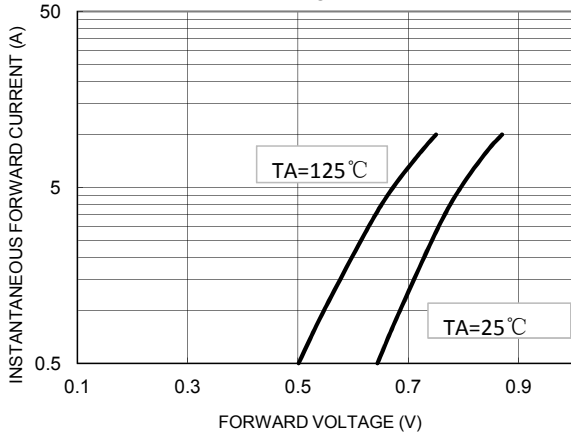
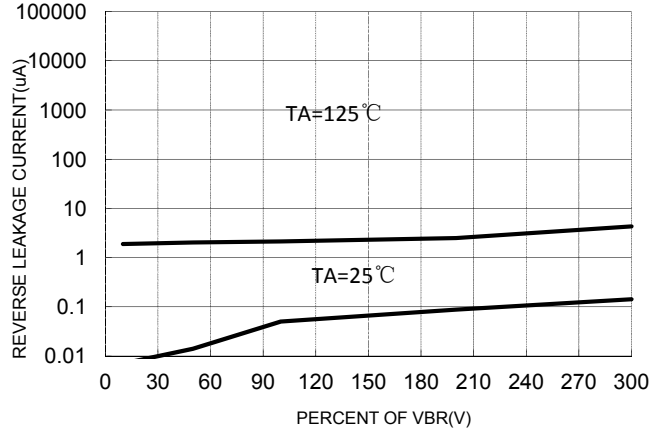
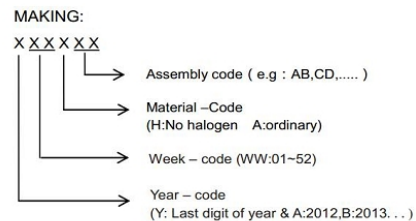


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body



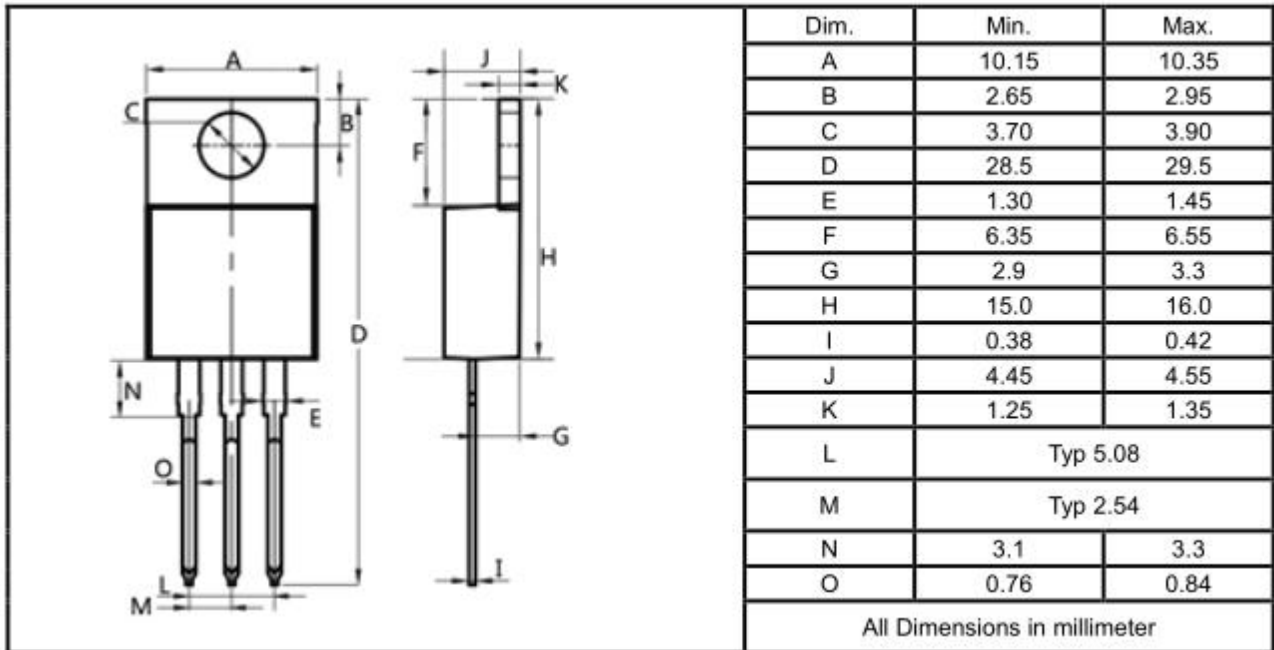
Ordering information

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
HRM20V300CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRM20V300FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRM20V300DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRM20V300DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box4000pcs/carton

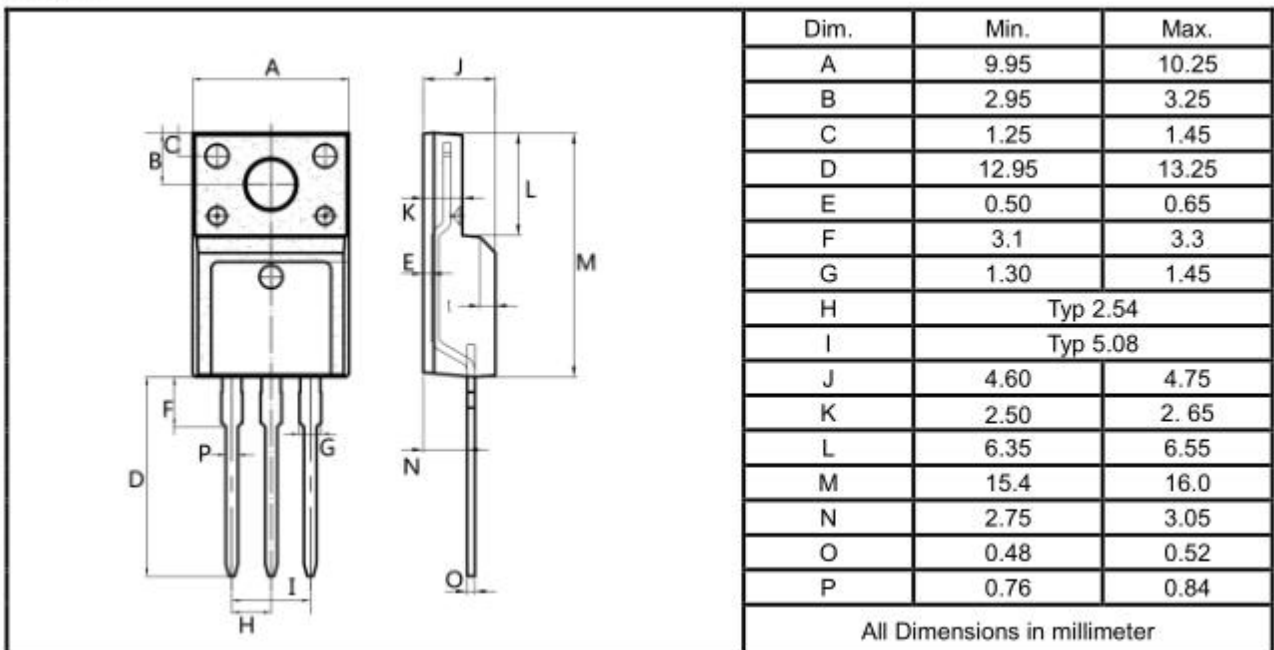
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

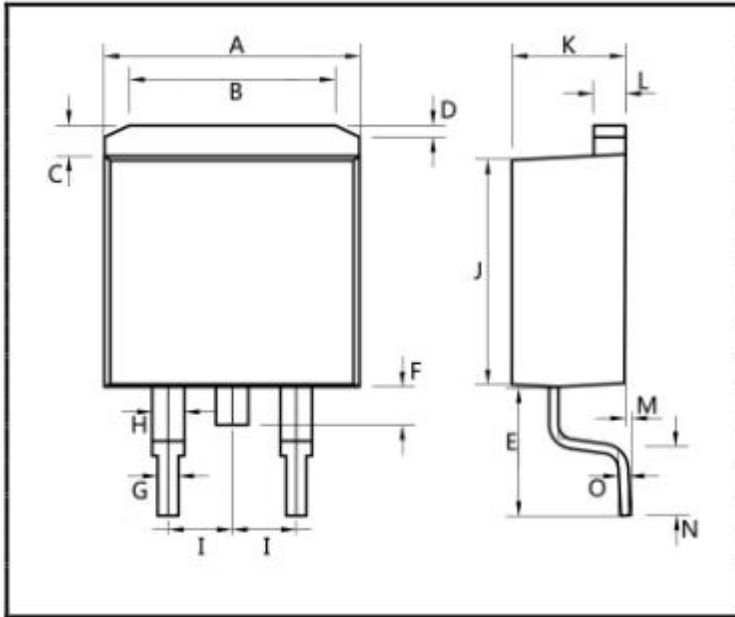
TO-220AB



TO-220F



TO-263



Dim.	Min.	Max.
A	10.1	10.2
B	7.4	7.6
C	1.3	1.5
D	0.55	0.75
E	5.0	6.0
F	1.4	1.6
G	0.78	0.86
H	1.2	1.3
I	Typ 2.54	
J	8.4	8.6
K	4.45	4.55
L	1.25	1.35
M	0.02	0.1
N	2.4	2.8
O	0.36	0.40
All Dimensions in millimeter		