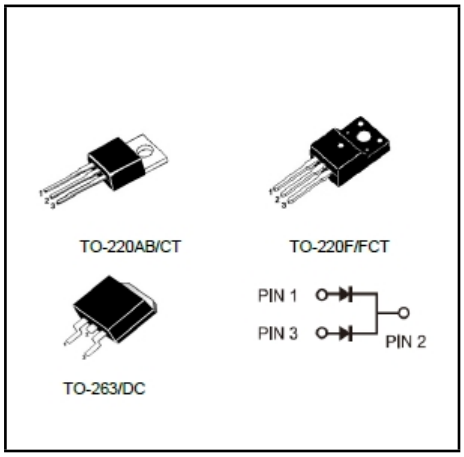
Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 150 V

Forward Current - 40 A

lead-free ROHS



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 temperature275℃maximum,10s per JESD22-106

Primary Characteristic

I_o	**2*20A**
V_{RRM}	**150V**
I_{FSM}	**250A**
V_F	**0.72V**
T_J **Max**	**175°C**

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Parameter		Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	150	V
Maximum RMS voltage		V_{RMS}	150	V
Maximum DC Blocking Voltage		V_{DC}	150	V
Maximum Average Forward Rectified Current	Per Leg	I_o	20	A
	Total		40	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave		I_{FSM}	250	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
Forward Voltage Drop(Note2)		V_F	Typ	Max	V
at I_F=5A	TA=25°C		0.66	-	
	TA=125°C		0.55	-	
at I_F=10A	TA=25°C		0.75	0.82	
	TA=125°C		0.62	-	
at I_F=20A	TA=25°C		0.84	0.89	
	TA=125°C		0.72	-	
Maximum Reverse Current at V_R=150V	TA=25°C	I_R	0.6	5	uA
	TA=125°C		0.6	-	mA

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

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RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

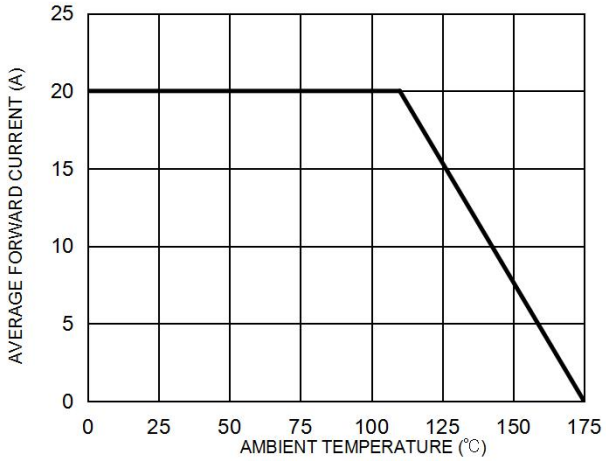


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

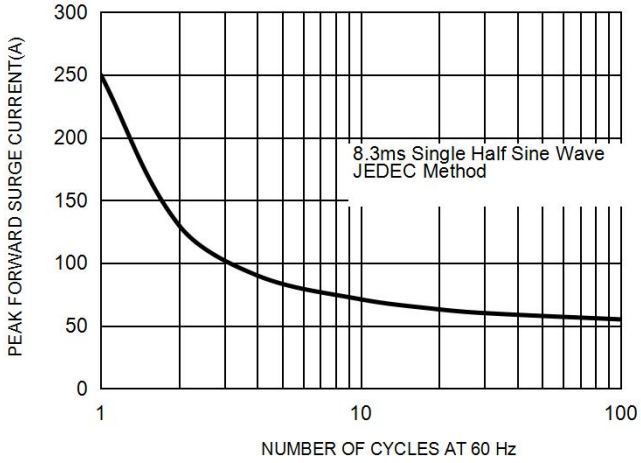


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

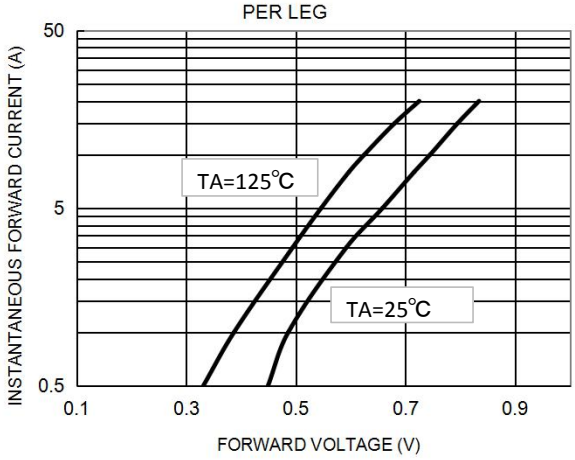
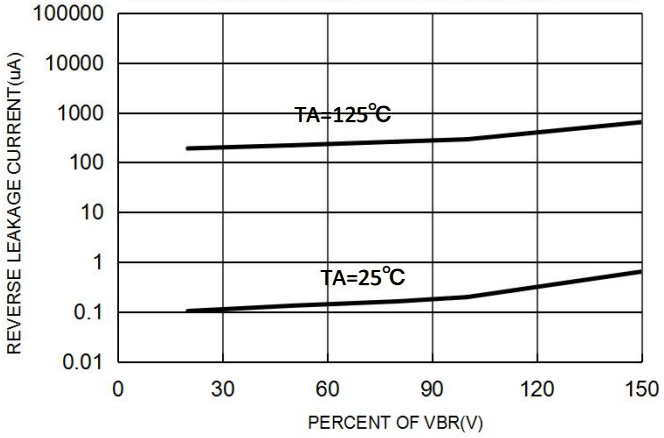
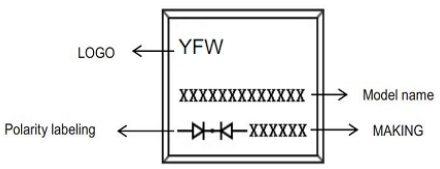
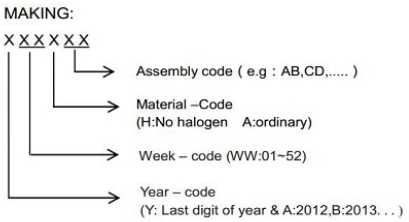


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body





Ordering information

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
HRT40L150CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRT40L150FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRT40L150DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
HRT40L150DC-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.

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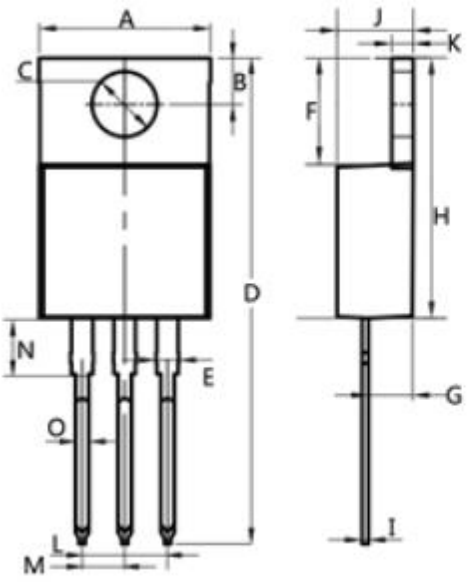
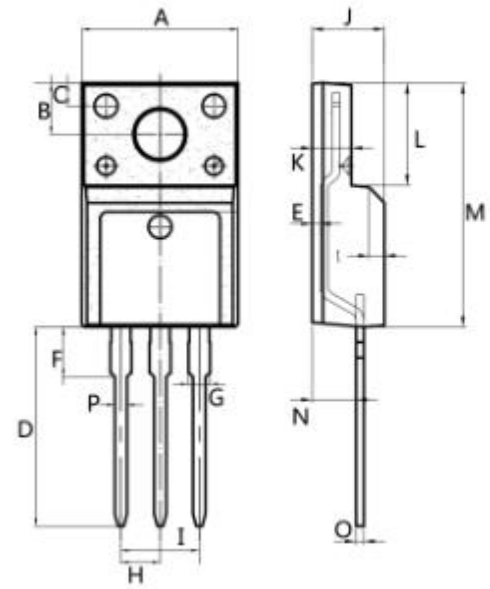
Package Outline Dimensions millimeters

TO-220AB



Dim.	Min.	Max.
A	10.15	10.35
B	2.65	2.95
C	3.70	3.90
D	28.5	29.5
E	1.30	1.45
F	6.35	6.55
G	2.9	3.3
H	15.0	16.0
I	0.38	0.42
J	4.45	4.55
K	1.25	1.35
L	Typ 5.08	
M	Typ 2.54	
N	3.1	3.3
O	0.76	0.84
All Dimensions in millimeter		

TO-220F



Dim.	Min.	Max.
A	9.95	10.25
B	2.95	3.25
C	1.25	1.45
D	12.95	13.25
E	0.50	0.65
F	3.1	3.3
G	1.30	1.45
H	Typ 2.54	
I	Typ 5.08	
J	4.60	4.75
K	2.50	2. 65
L	6.35	6.55
M	15.4	16.0
N	2.75	3.05
O	0.48	0.52
P	0.76	0.84
All Dimensions in millimeter		

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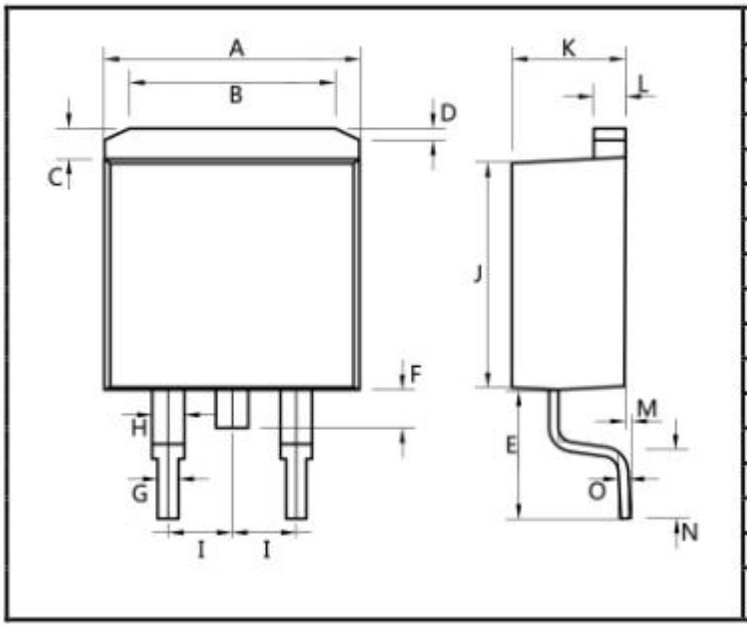
TO-263



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		

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