

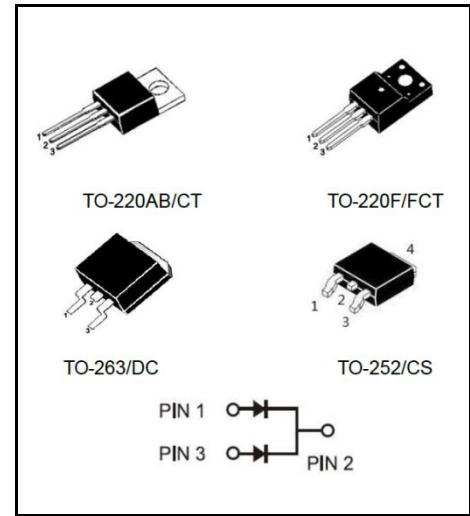
ULTRAFAST RECOVERY RECTIFIERS

Reverse Voltage - 400 V

Forward Current - 10 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 TO-252/CS
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106

Primary Characteristic

I_o	2*5A
V_{RRM}	400V
I_{FSM}	160A
V_F	1.15V
T_J Max	150°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}	400	V
Working Peak Reverse Voltage	V_{RWM}	400	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward Rectified Current	Per Leg	5	A
	Total	10	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	I_{FSM}	50	A
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-40 ~ +150	°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 $I_F=2A$	V_F	-	-	V				
					TA=25°C	1.01	-	
					TA=125°C	0.87	-	
					at $I_F=3A$	TA=25°C	1.08	-
						TA=125°C	0.95	-
					at $I_F=5A$	TA=25°C	1.15	1.39
TA=125°C	1.05	-						
Maximum Reverse Current at $V_R=400V$	I_R	-	TA=25°C	0.1	1	uA		
			TA=125°C	10	-	uA		
Maximum Reverse Recovery Time at $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$	T_{rr}	-	-	35	nS			

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

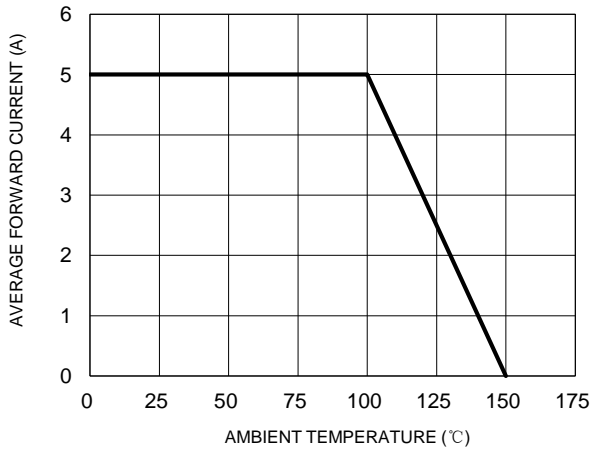


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

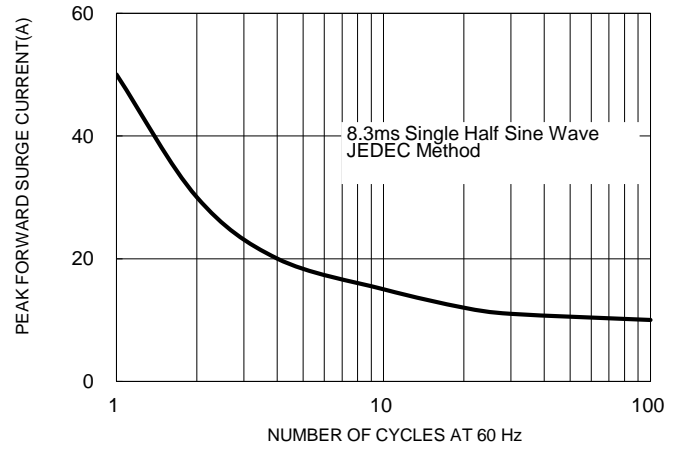


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

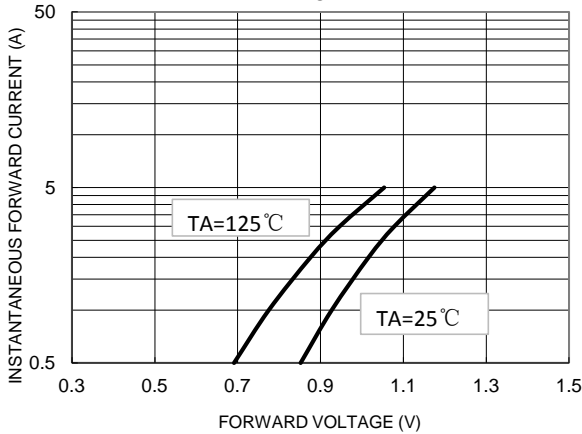
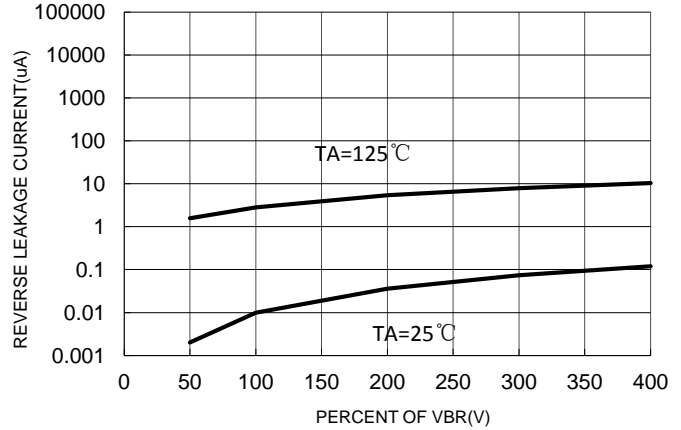
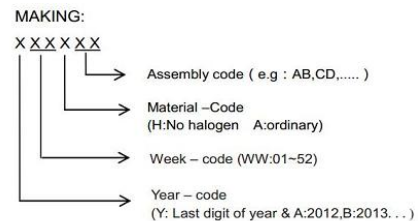


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body



Ordering information

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MUR1040CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box4000pcs/carton
MUR1040CS	TO-252	0.011oz(0.32g)	2500 pcs / reel	2.5Kpcs/box12.5Kpcs/carton

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

Package Outline Dimensions millimeters

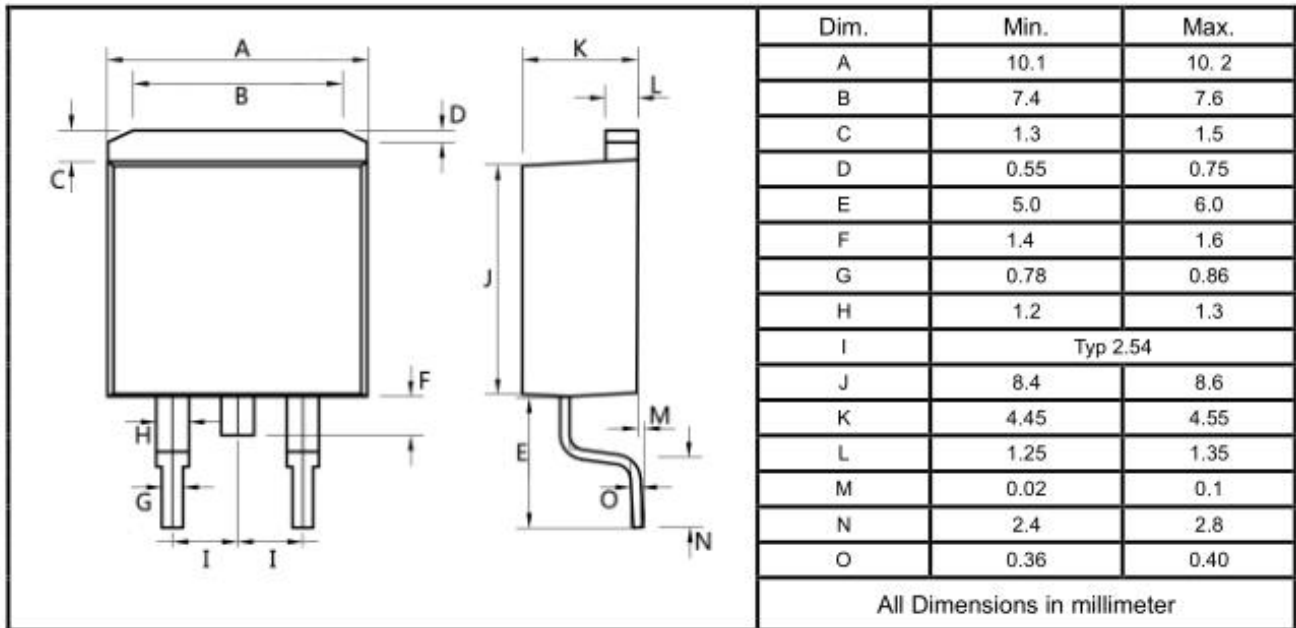
TO-220AB

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		

TO-263



TO-252

