

## Trench MOS Barrier Schottky Rectifier

**Reverse Voltage - 45 V**

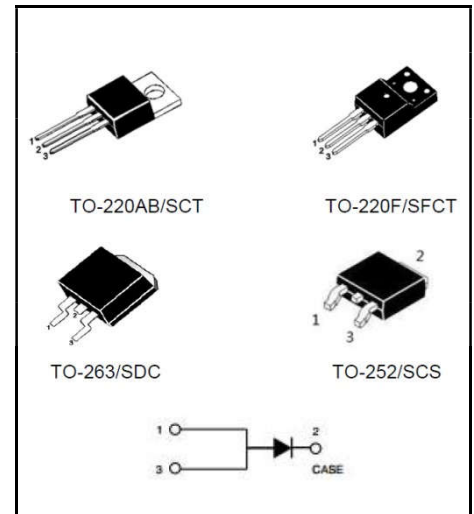
**Forward Current - 10 A**

### 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

<b>I<sub>o</sub></b>	<b>10A</b>
<b>V<sub>RRM</sub></b>	<b>45V</b>
<b>I<sub>FSM</sub></b>	<b>180A</b>
<b>V<sub>F</sub></b>	<b>0.43V</b>
<b>T<sub>J</sub> Max</b>	<b>150°C</b>

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

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	<b>V<sub>RRM</sub></b>	45	<b>V</b>
Working Peak Reverse Volta	<b>V<sub>RMS</sub></b>	31.5	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	45	<b>V</b>
Maximum Average Forward Rectified Current	<b>I<sub>o</sub></b>	10	<b>A</b>
Peak Forward Surge Current, 8,3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	<b>I<sub>FSM</sub></b>	180	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	-50 ~ +150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-50 ~ +150	<b>°C</b>
Typical Thermal Resistance (Note1) TO-220AB, TO-263 2 TO-220F TO-252	<b>R<sub>θJC</sub></b>	2 4	<b>°C/W</b>

**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)		<b>V<sub>F</sub></b>	<b>Typ</b>	<b>Max</b>	<b>V</b>
at I <sub>F</sub> =3A	TA=25°C		0.34	-	
	TA=125°C		0.27	-	
at I <sub>F</sub> =5A	TA=25°C		0.38	-	
	TA=125°C		0.32	-	
at I <sub>F</sub> =10A	TA=25°C		0.46	0.52	
	TA=125°C	0.43	-		
Maximum Reverse Current at V <sub>R</sub> =45V	TA=25°C	<b>I<sub>R</sub></b>	50	100	<b>uA</b>
	TA=125°C		9	-	<b>mA</b>

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

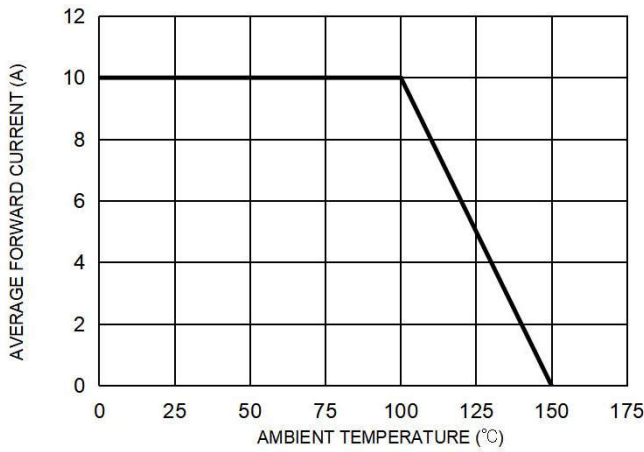


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

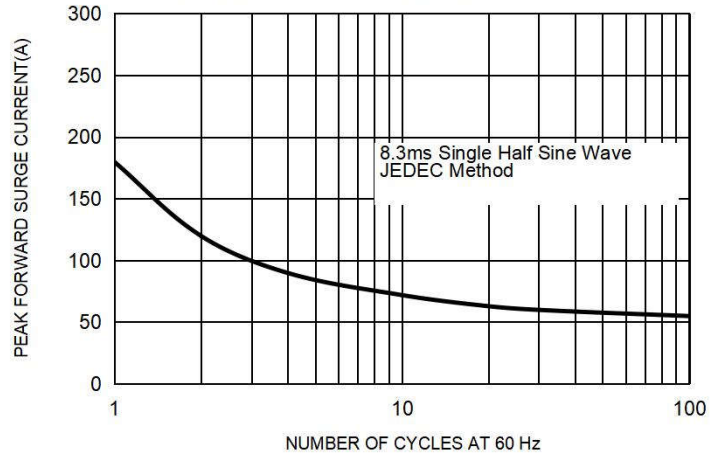


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

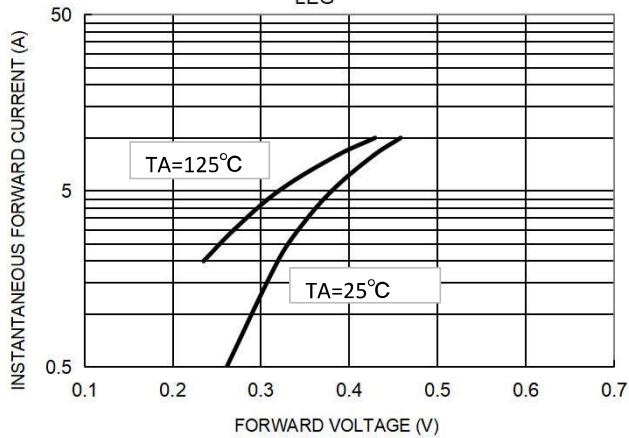
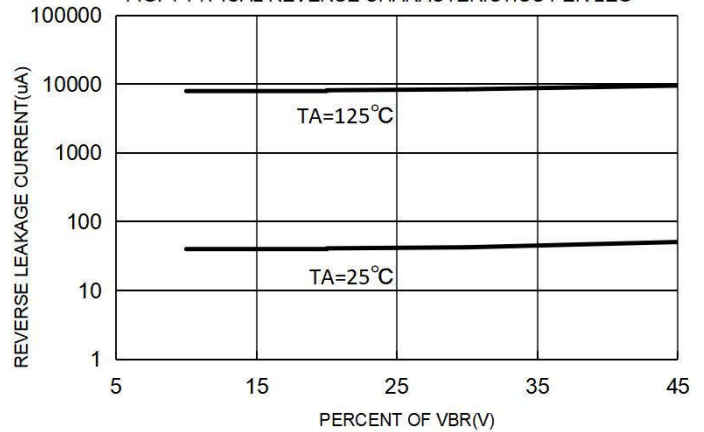
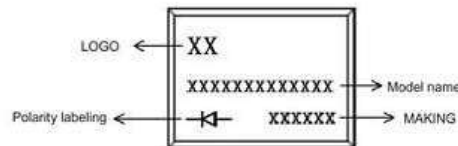


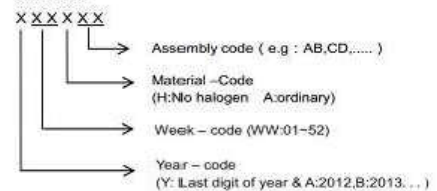
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



**MAKING:**



**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
SRT10L45SCT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT10L45SFCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT10L45SDC-G	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT10L45SDC	TO-263	0.04oz(1.16g)	800 pcs / reel	1600pcs/box4000pcs/carton
SRT10L45SCS	TO-252	0.011oz(0.32g)	2500 pcs / tube	5000pcs/box 5000pcs/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		

Package Outline Dimensions millimeters

**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	Typ2.54	
	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			

**TO-252**

	Dim.	Min.	Typ.	Max.
	A	2.10	-	2.50
	A2	0	-	0.10
	B	0.66	-	0.86
	B2	5.18	-	5.48
	C	0.40	-	0.60
	C2	0.44	-	0.58
	D	5.90	-	6.30
	D1	5.30REF		
	E	6.40	-	6.80
	E1	4.63	-	-
	G	4.47	-	4.67
	H	9.50	-	10.70
	L	1.09	-	1.21
	L2	1.35	-	1.65
V1	-	7°	-	
V2	0°	-	6°	
All Dimensions in millimeter				

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