

Schottky Barrier Rectifiers

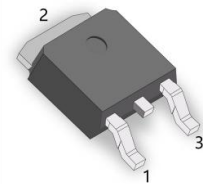
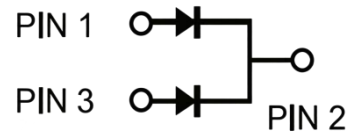
Parameter	Value	Unit
V_{RRM}	45	V
$I_{F(AV)}$	10(2*5)	A

Features

- Common cathode structure
- Low power consumption, high efficiency
- Good high-temperature characteristics
- Over voltage protection loop, high reliability

Applications

- Power Factor Correction(PFC)
- Switched Mode Power Supply(SMPS)
- Uninterruptible Power Supply(UPS)
- Air Conditioner



TO-252/CS



TO-220F/FCT

Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$, unless otherwise noted)

Parameter		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	45	V
Working Peak Reverse Voltage		V_{RWM}	45	V
Maximum DC Blocking Voltage		V_{DC}	45	V
RMS Reverse Voltage		$V_{R(RMS)}$	31.5	V
Average Forward Rectified Current ($T_c=105^{\circ}\text{C}$)	Per Leg	$I_{F(AV)}$	5	A
	Total		10	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	200	A
Maximum Junction Temperature		T_J	150	$^{\circ}\text{C}$
Storage Temperature Range		T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note: 1. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

3. Thermal resistance junction to case mounted on heatsink.

Thermal Data

Parameter		Symbol	Value	Unit
Thermal Resistance from Junction to Ambient	TO-220F	$R_{\theta JA}$	60	$^{\circ}\text{C/W}$
	TO-252		110	$^{\circ}\text{C/W}$
Thermal Resistance From Junction To Case	TO-220F	$R_{\theta JC}$	4	$^{\circ}\text{C/W}$
	TO-252		6	$^{\circ}\text{C/W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 1)	$V_{(BR)}$	$I_R=0.2mA$	45			V
Forward Voltage Drop	V_F	$I_F=5A$			0.7	V
Leakage Current (Note 1)	I_R	$V_R=45V$			200	μA

Notes:

1. Short duration pulse test used to minimize self-heating effect.
2. Thermal resistance junction to case mounted on heatsink.

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

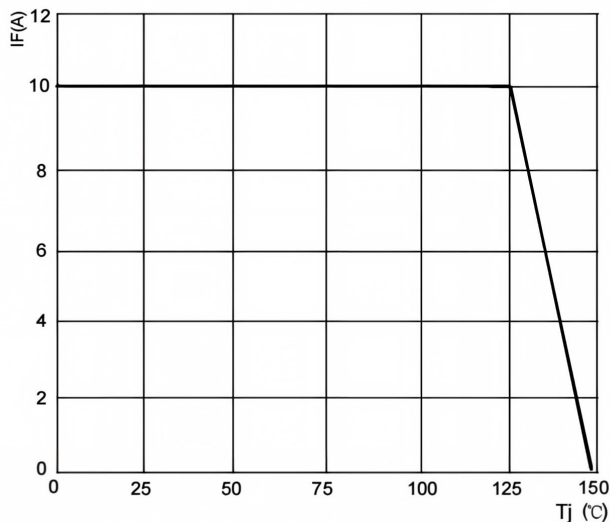


FIG.2: TYPICAL FORWARD CHARACTERISTICS

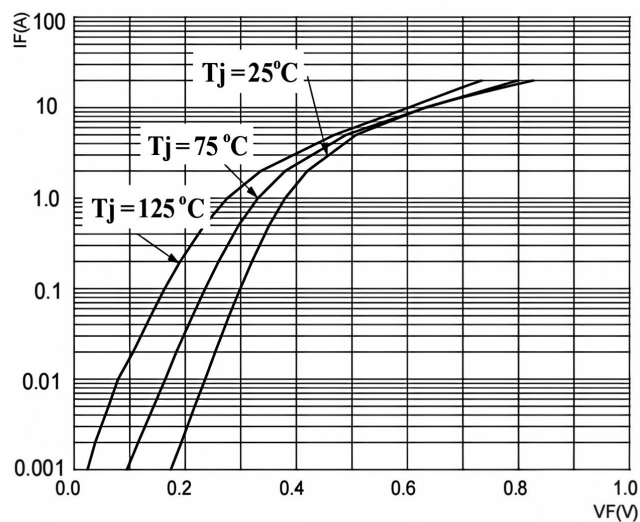


FIG.3: TOTAL CAPACITANCE DERATING CURVE

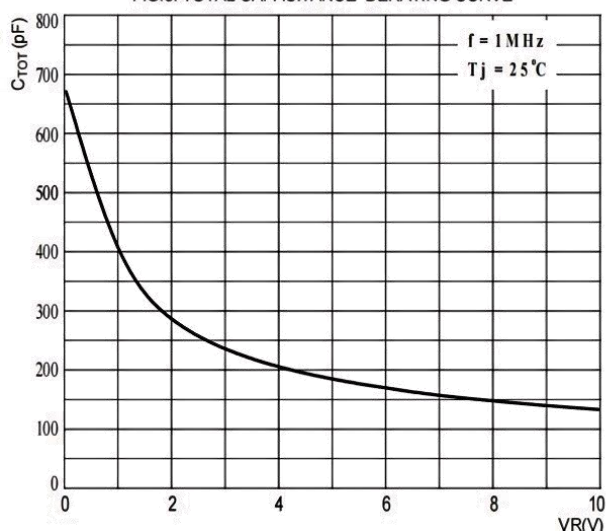
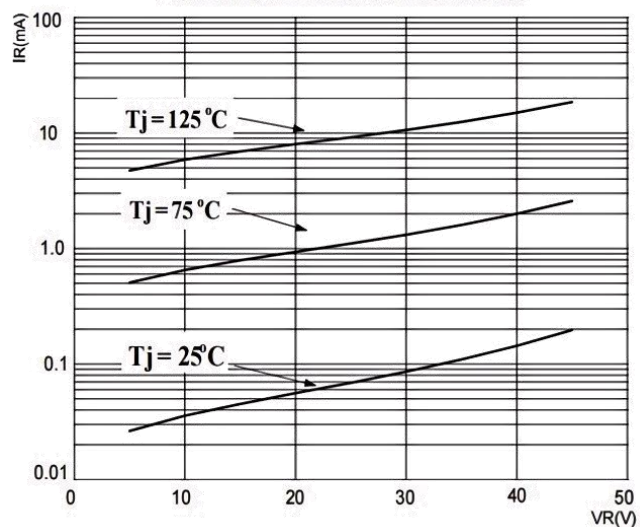
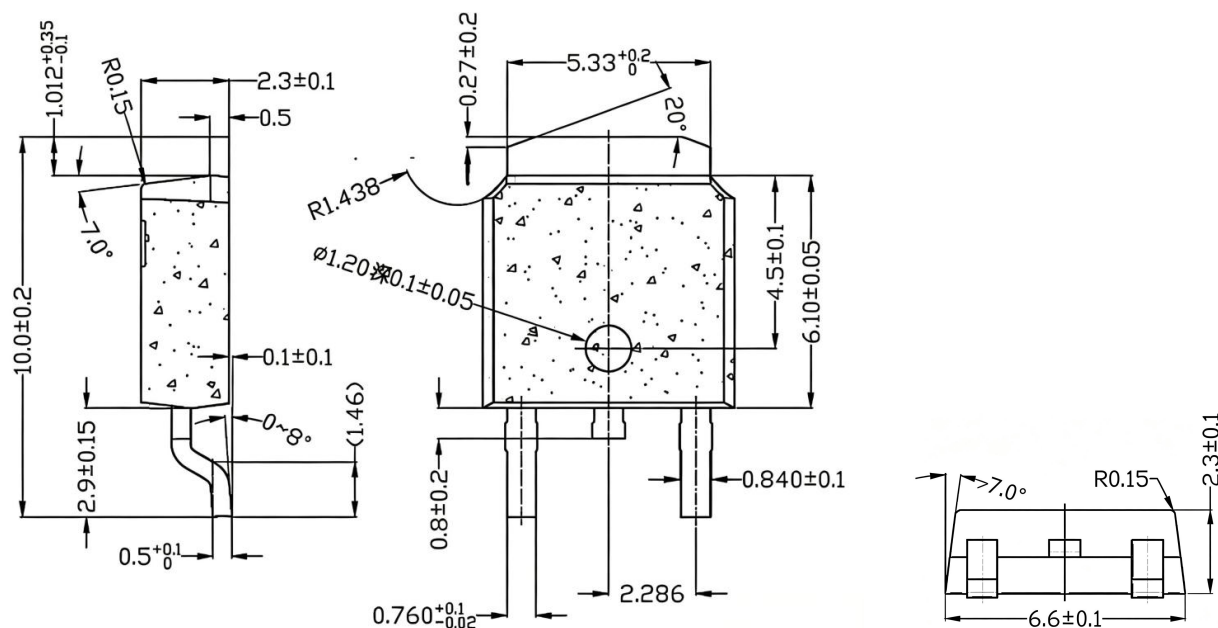


FIG.4: TYPICAL REVERSE CHARACTERISTICS

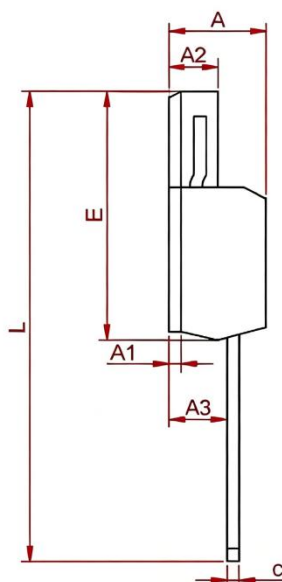
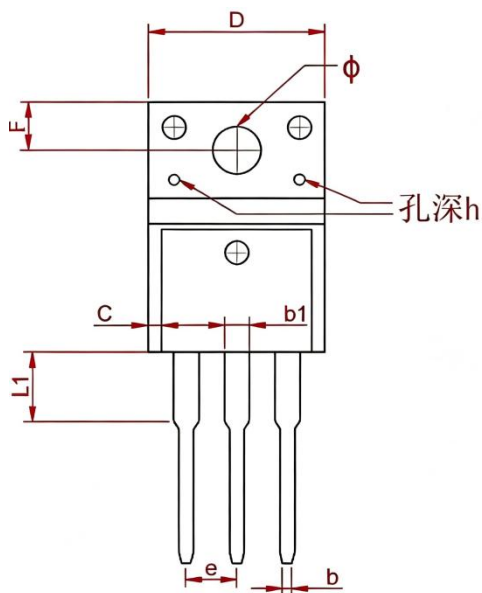


Package Outline

TO-252



TO-220F



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.300	4.750
A1	0.7 REF	
A2	2.300	2.850
A3	2.500	2.900
b	0.380	0.420
b1	1.220	1.280
C	1.08	1.200
c	0.480	0.520
D	10.15	10.450
E	15.700	15.950
e	2.574 TYP	
F	3.470 REF	
y	3.200 REF	
h	0.000	0.800
L	28.780	28.900
L1	2.990	3.100

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