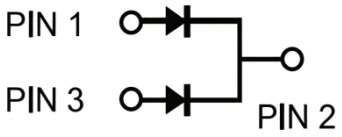
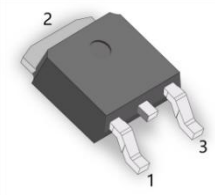
Schottky Barrier Rectifiers

Parameter	Value	Unit
V_{RRM}	100	V
$I_{F(AV)}$	20(2*10)	A





TO-252/CS

TO-220F/FCT

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

Absolute Maximum Ratings(Ta=25℃,unless otherwise noted)

Parameter		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Working Peak Reverse Voltage		V_{RWM}	100	V
Maximum DC Blocking Voltage		V_{DC}	100	V
RMS Reverse Voltage		$V_{R(RMS)}$	70	V
Average Forward Rectified Current	Per Leg	$I_{F(AV)}$	10	A
	Total		20	
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	300	A
Maximum Junction Temperature		T_J	175	℃
Storage Temperature Range		T_{STG}	-55 to +150	℃
Typical total capacitance(V_R=5V,f= 1MHz)		$C_{j\ (Ctot)}$	500	pF

Note:

1.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.

Thermal Data

Parameter		Symbol	Value	Unit
Thermal Resistance from Junction to Ambient	TO-220F	$R_{\theta JA}$	58	℃/W
	TO-252		100	℃/W
Thermal Resistance From Junction To Case	TO-220F	$R_{\theta JC}$	3	℃/W
	TO-252		5	℃/W

Electrical Characteristics (Ta=25℃, unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=0.2mA		100			V
Reverse current	I_R	V_R=100V	T_j=25℃			5	uA
			T_j=125℃		5.0		mA
Forward voltage	V_F	I_F=5A	T_j=25℃			0.8	V
			T_j=125℃		0.60		V
		I_F=10A	T_j=25℃			0.95	V
			T_j=125℃		0.68		V

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

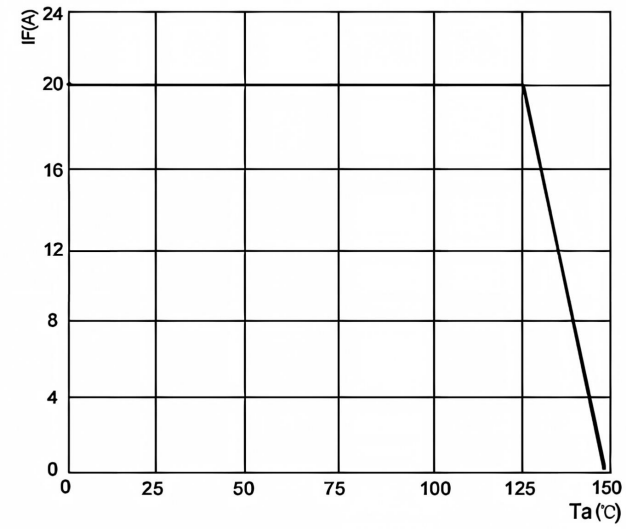


FIG.2: TYPICAL FORWARD CHARACTERISTICS

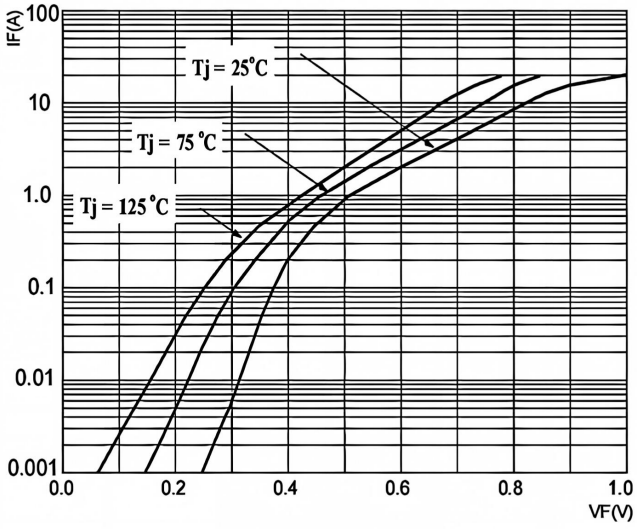


FIG.3: TOTAL CAPACITANCE DERATING CURVE

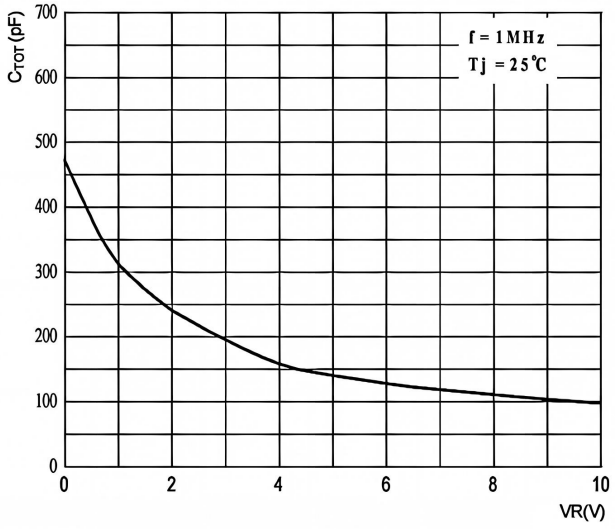
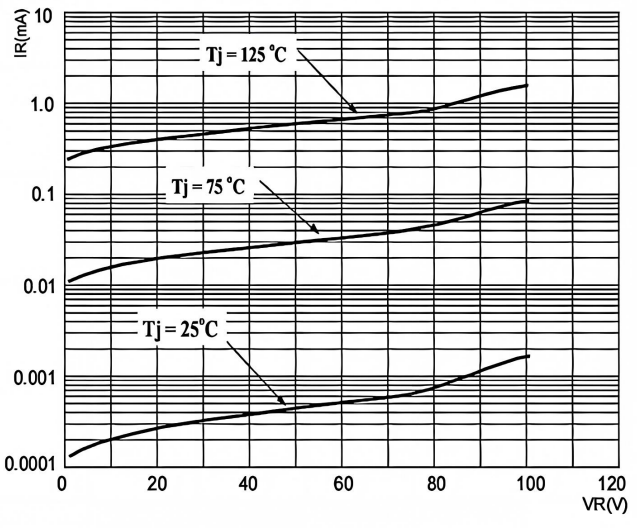
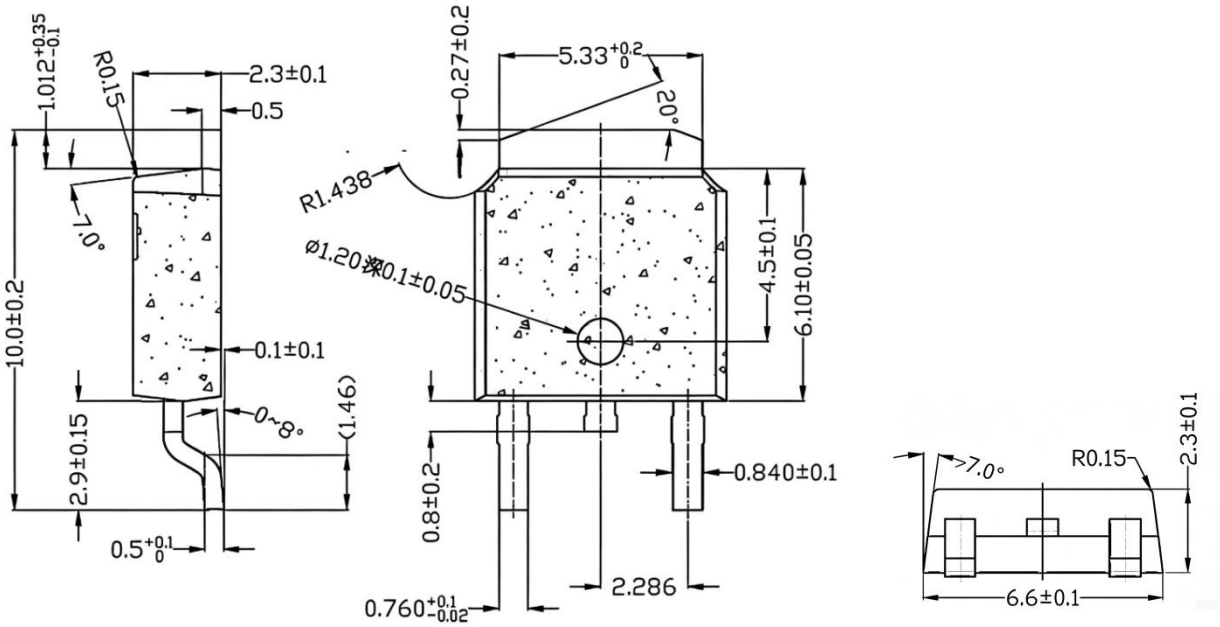


FIG.4: TYPICAL REVERSE CHARACTERISTICS

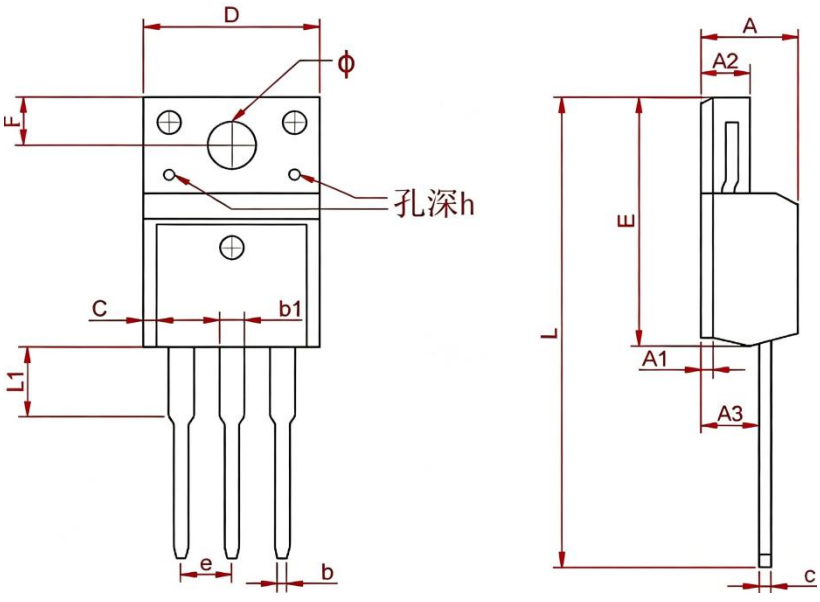


Package Outline

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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