

## S3P45R

### 3.0AMPS. PLANAR MOS SCHOTTKY BARRIER RECTIFIERS

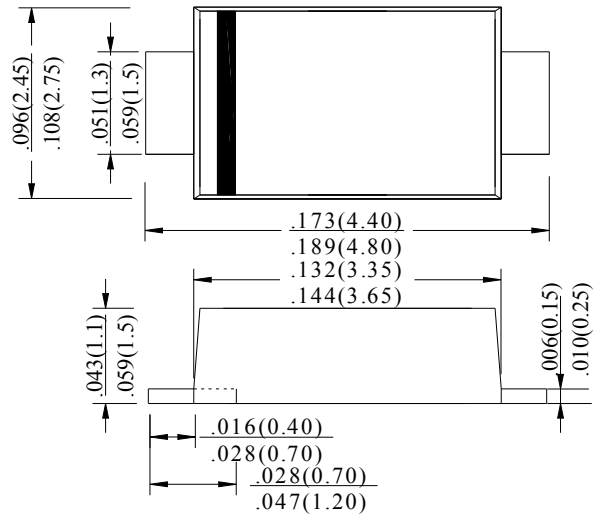
#### FEATURE

- . For surface mounted application
- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge current capability
- . High temperature soldering guaranteed  
260°C/10 seconds at terminals.

#### MECHANICAL DATA

- . Terminal: Solder plated
- . Case: Molded with UL-94 Class V-0 recognized  
Flame Retardant Epoxy (free halogen)
- . Polarity: color band denotes cathode
- . Packaging: 12mm tape per EIA STD RS-481

#### SMF



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	SYM BOL	S3P45R	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	31.5	V
Maximum DC blocking Voltage	$V_{DC}$	45	V
Maximum Average Forward Rectified Current at $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	70.0	A
Maximum Forward Voltage @ $T_A = 25^\circ\text{C}$	at 3.0A DC	$V_{F Max}$	0.45
	at 1.0A DC	$V_{F Type}$	0.34
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	$I_R$		0.2
			10.0
Typical Junction Capacitance (Note1)	$C_J$	360	pF
Typical Thermal Resistance (Note2)	$R_{(JL)}$	40	$^\circ\text{C/W}$
	$R_{(JC)}$	28	
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	$T_J$	-55 to +150	$^\circ\text{C}$

#### Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Measured on P.C.Board with 0.2×0.2"(5.0×5.0mm)Copper Pad Areas.

**RATING AND CHARACTERISTIC CURVES (S3P45R)**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

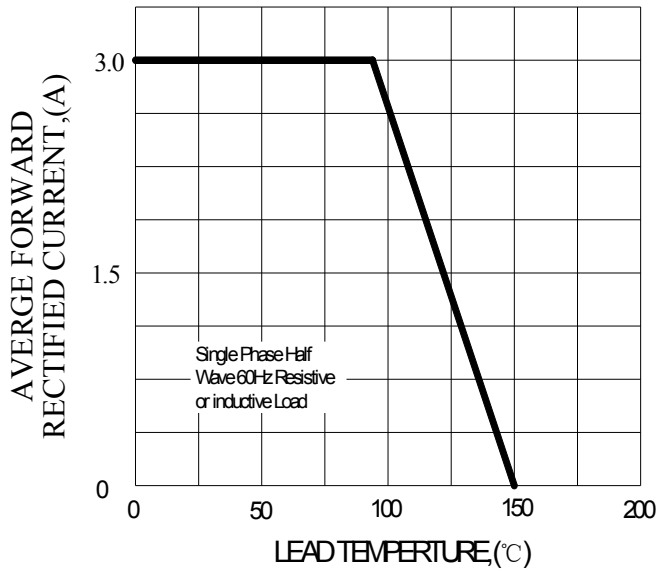


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

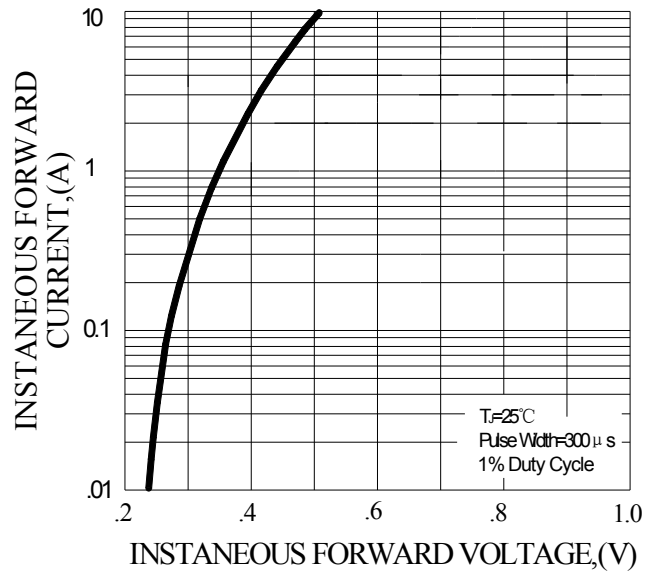


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

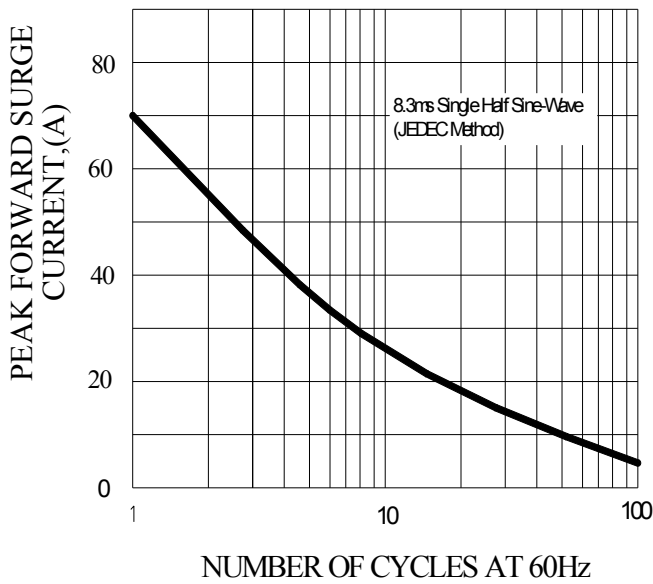
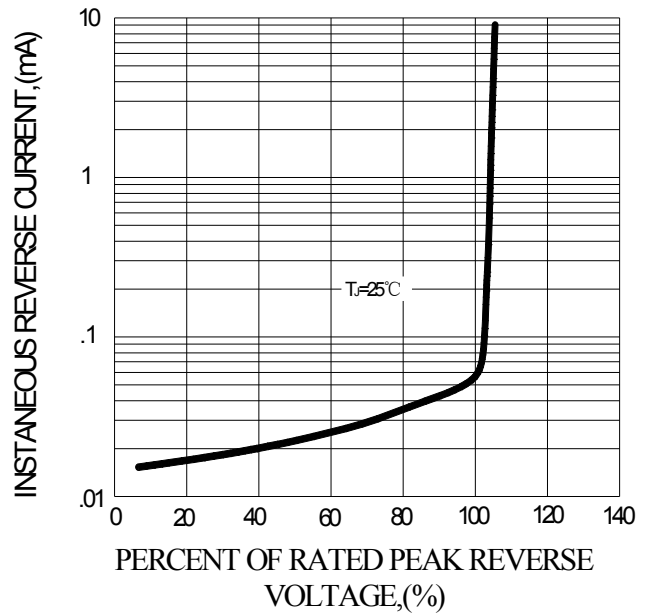
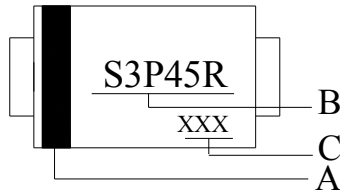


FIG.4-TYPICAL REVERSE CHARACTERISTICS



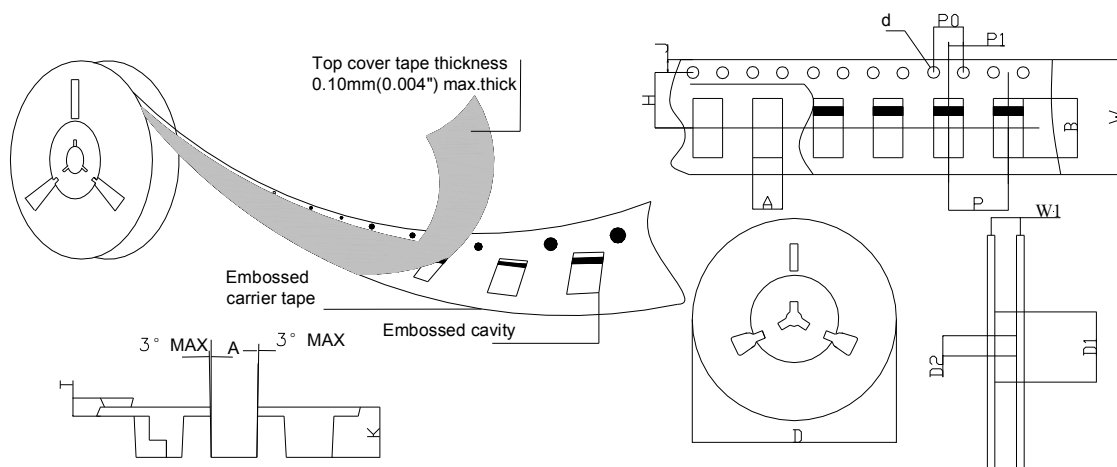
## Marking and packaging illustration

### 1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product name
C	Date Code

### 2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE
SYMBOL		SMF
ITEM		
Carrier width	A	2.93(0.115)Max
Carrier length	B	4.85(0.191)Max
Sprocket hole	d	ø1.55(0.061)Typ
Reel outer diameter	D	330.0(13.0)Typ
Reel inner diameter	D1	50.0(1.969)Min
Feed hole diameter	D2	13.0(0.512)Typ
Sprocket hole position	J	1.75(0.069)Typ
Punch hole position	H	5.50(0.217)Typ
Carrier depth	K	1.42(0.056)Typ
Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole pitch	P0	4.00(0.157)Typ
Embossment center	P1	2.00(0.079)Typ
Overall tape thickness	T	0.25(0.010)Typ
Tape width	W	12.0(0.472)Typ
Reel width	W1	12.4(0.488)Min

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