**Features**

- ◇ High current capability, low forward voltage
- ◇ Excellent high temperature stability
- ◇ Low power loss, and high efficiency
- ◇ High forward surge capability
- ◇ RoHS compliant, and Halogen free

Mechanical Data

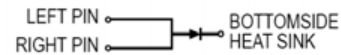
- ◇ Case: TO-277 small outline plastic package
- ◇ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ◇ Molding Compound Flammability Rating:UL 94V-0
- ◇ High temperature soldering guaranteed: 260°C /10second
- ◇ Packed with FRP substrate and epoxy underfilled

Applications

- ◇ Switching mode power supply applications
- ◇ Portable equipment battery applications
- ◇ High frequency rectification
- ◇ DC/DC converter
- ◇ Designed as bypass diodes for solar panels

Ordering Information

- ◇ Device: YS20U45SL
- ◇ Package: TO-277
- ◇ Marking: 20U45SL
- ◇ Material: Halogen free
- ◇ Packing: Tape & 13" Reel
- ◇ Quantity per reel: 5,000pcs

Pin Configuration**Maximum Ratings** @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{RRM}	Repetitive Peak Reverse Voltage	45	V
$I_{F(AV)}$	Average Forward Current	20	A
I_{FSM}	Peak Forward Surge Current, 8.3ms single half sine-wave	300	A
T_J & T_{STG}	Junction and Storage Temperature	-40~+150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_F	Forward Voltage	$I_F = 3A$		0.32	0.35	V
		$I_F = 10A$		0.42	0.44	V
		$I_F = 20A$		0.49	0.52	V
I_R	Reverse Leakage Current	$V_R = 45V$			0.3	mA
C_J	Junction Capacitance	$f=1\text{MHz}, V_R=4V$		600		pF
$R_{th(JA)}$	Thermal Resistance (note 1)			31		$^\circ\text{C/W}$

Note 1: Polyimide PCB, 2oz. copper. Cathode pad dimensions 18.8x14.4mm. Anode pad dimensions 5.6x14.4mm

DEVICE CHARACTERISTICS

YS20U45SL

Electrical characteristic curves

Fig.1 - Typical Forward Current Derating Curve

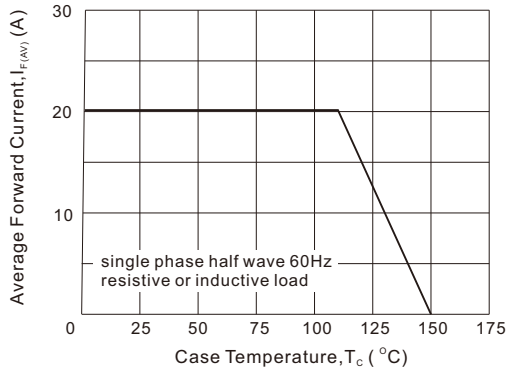


Fig. 2 - Instantaneous Forward Characteristics

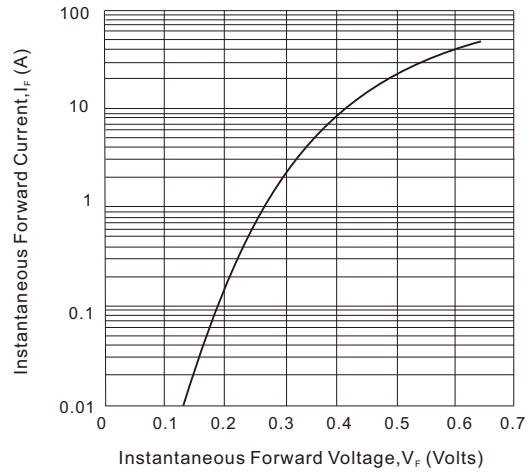


Fig.3 - Non Repetitive Forward Current Surge Curve

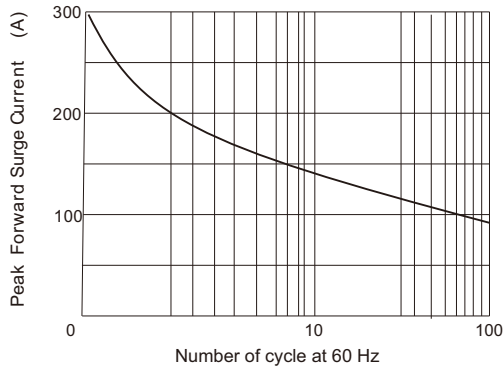
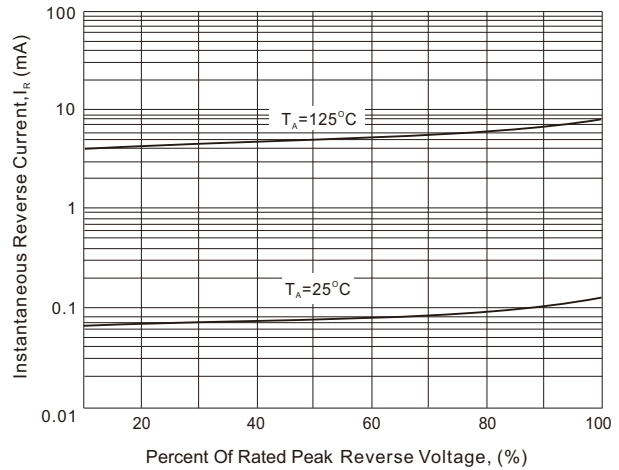


Fig. 4 - Reverse Characteristics



PACKAGE OUTLINE AND DIMENSIONS

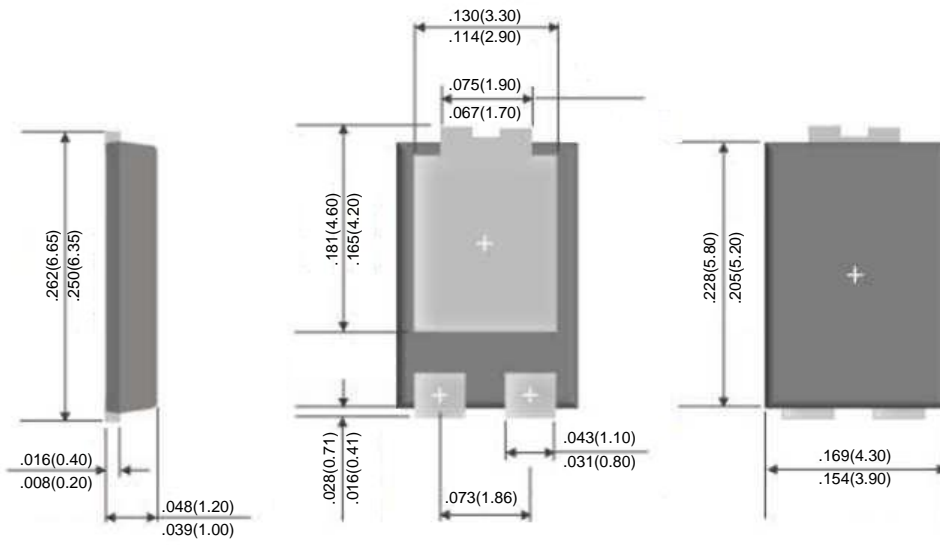
YS20U45SL

PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

TO-277

Outline drawing and Dimension

Unit:inch(mm)



FOOT PRINT RECOMMENDATION	MARKING CODE	
<p style="text-align: center;">unit: mm</p>		
	YS	20U45SL
	Logo	Device name
		XXXX
		Date code