



## 25SQ045-P158

Preliminary

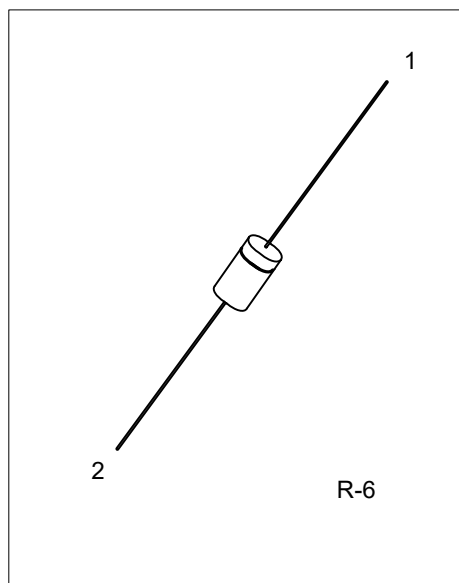
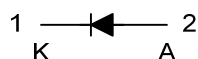
DIODE

### PHOTOVOLTAIC BYPASS SCHOTTKY BARRIER RECTIFIER

#### ■ FEATURES

- \* High frequency operation
- \* Low forward voltage drop
- \* High purity, high temperature epoxy encapsulation forenhanced mechanical strength and moisture resistance
- \* Guard ring for enhanced ruggedness and long term reliability

#### ■ SYMBOL



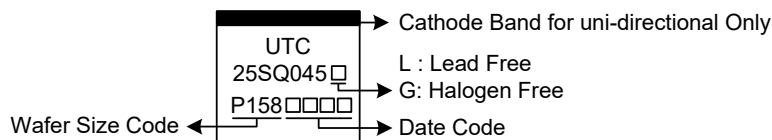
#### ■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
25SQ045L-P158-R06-B	25SQ045G-P158-R06-B	R-6	K	A	Tape Box

Note: Pin Assignment: K: Cathode A: Anode

25SQ045G-P158-R06-B	
(1)Packing Type	(1) B: Tape Box
(2)Package Type	(2) R06: R-6
(3)Wafer Size Code	(3) P158
(4)Green Package	(4) G: Halogen Free and Lead Free, Blank: Pb free

#### ■ MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

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

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	$V_{RM}$	45	V
Working Peak Reverse Voltage	$V_{RWM}$	45	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	45	V
Average Rectified Output Current @ 60Hz Half Sine Wave, 1 Cycle, $T_A=25^{\circ}\text{C}$	$I_O$	25	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	400	A
Operating Junction Temperature	$T_J$	$-55 \sim +125$	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	$-55 \sim +125$	$^{\circ}\text{C}$

Note: 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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	$\theta_{JC}$	2.5	$^{\circ}\text{C}/\text{W}$

■ ELECTRICAL CHARACTERISTICS (PER LEG) ( $T_A=25^{\circ}\text{C}$  unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Maximum Instantaneous Forward Voltage Drop per Diode ( $T_J=25^{\circ}\text{C}$ )	$V_F$	$I_F=25\text{A}$			0.53	V
Leakage Current	$I_R$	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$			100	$\mu\text{A}$
		$V_R=45\text{V}, T_J=100^{\circ}\text{C}$			10	mA

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

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