



30SQ045-P158

Preliminary

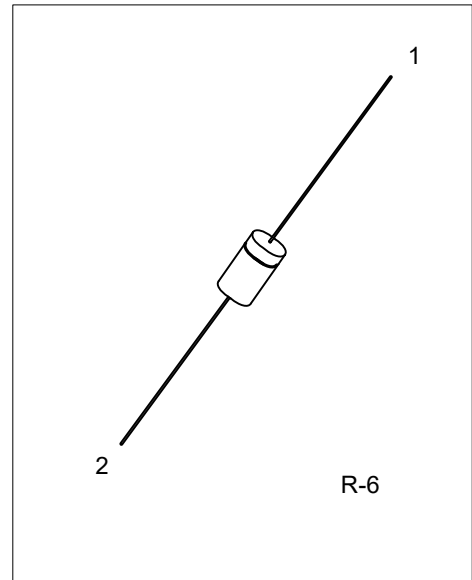
DIODE

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



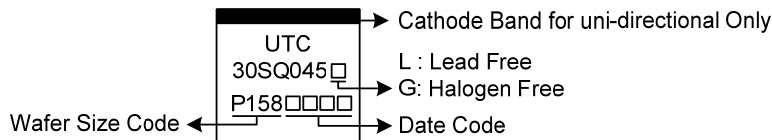
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
30SQ045L-P158-R06-B	30SQ045G-P158-R06-B	R-6	K	A	Tape Box

Note: Pin Assignment: K: Cathode A: Anode

30SQ045G-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	30	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	θ_{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	$I_F=30\text{A}$			0.56	V
Leakage Current	I_R	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$			100	μA
		$V_R=45\text{V}, T_J=100^{\circ}\text{C}$			10	mA

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

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