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8A ULTRA FAST RECOVERY SURFACE MOUNT RECTIFIER

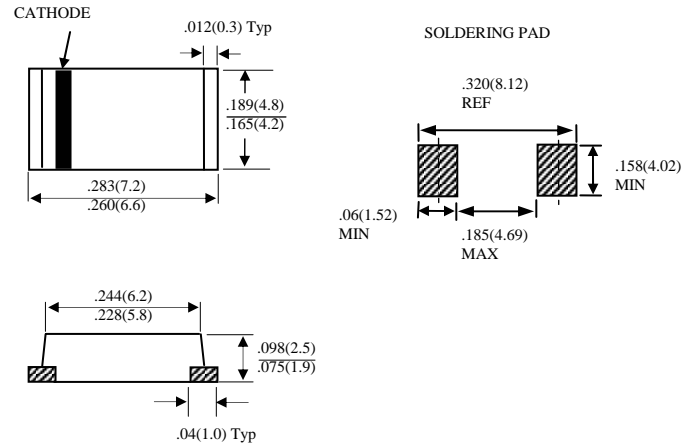
UK8A-LFR

FEATURES

- LOW PROFILE PACKAGE
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY 94V-0
- IDEAL FOR SURFACE MOUNTED APPLICATION
- GLASS PASSIVATED CHIP JUNCTION
- BUILT-IN STRAIN RELIEF DESIGN
- ULTRA FAST RECOVERY TIME FOR HIGH EFFICIENT
- HIGH TEMPERATURE SOLDERING: 250°C/10 SECONDS AT TERMINALS
- ROHS

MECHANICAL DATA

- CASE: TSMC, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.10 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

RATINGS	SYMBOL	UK8A-LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_J=75^\circ\text{C}$	I_O	8.0	A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	120	A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	75	PF
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150	°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150	°C

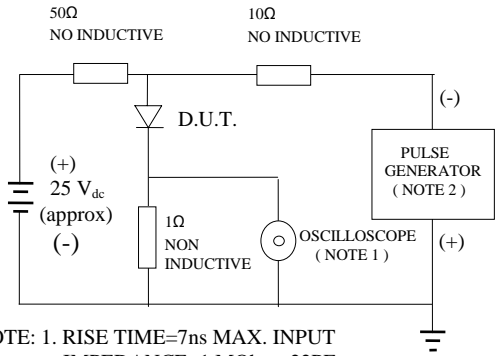
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	UK8A-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	0.95	V
MAXIMUM DC REVERSE CURRENT AT $T_A=25^\circ\text{C}$	I_R	5	μA
MAXIMUM DC REVERSE CURRENT AT $T_A=125^\circ\text{C}$	I_R	250	μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	50	nS
MARKING		UK8A	

- NOTES: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE UK8A-LFR

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
 2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

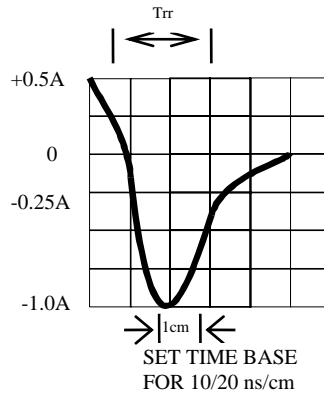


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

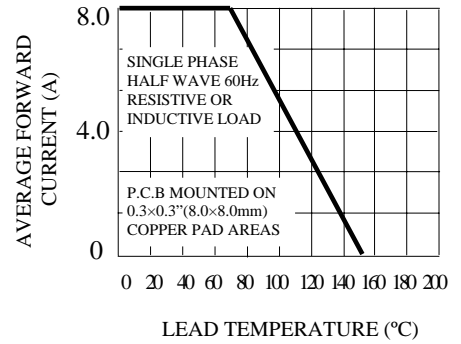


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

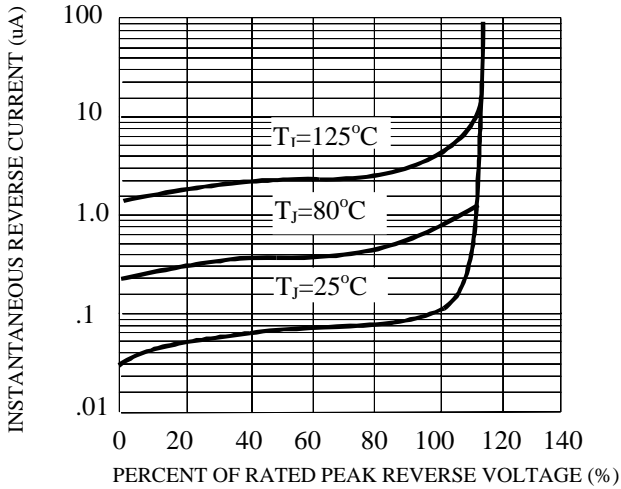


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

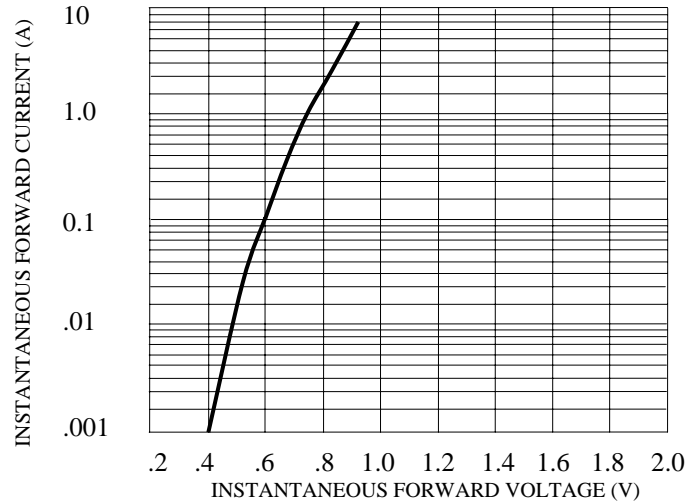


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

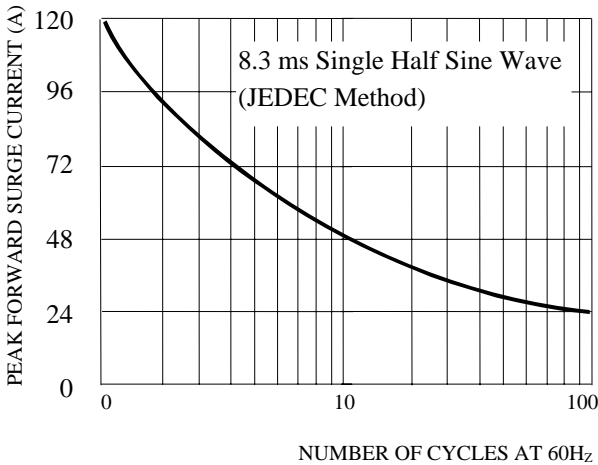


FIG. 6-TYPICAL JUNCTION CAPACITANCE

