



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

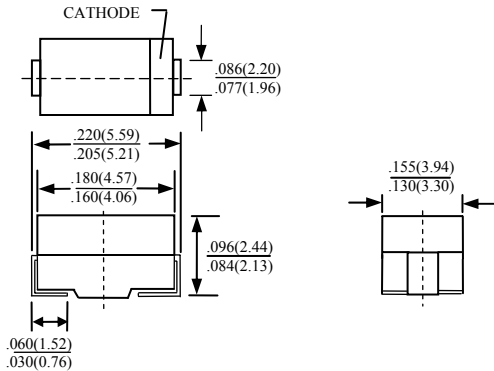
E-mail: frontiersales@frontierusa.com

Web: <http://www.frontierusa.com>

1A SURFACE MOUNT LOW FORWARD VOLTAGE SCHOTTKY BARRIER RECTIFIERS LS12B THRU LS14B

FEATURES

- FOR SURFACE MOUNTED APPLICATIONS
- LOW FORWARD VOLTAGE
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS
LABORATORY CLASSIFICATION 94 V-0
- EXTREMELY LOW VF
- MAJORITY CARRIER CONDUCTION
- HIGH TEMPERATURE SOLDERING: 250°C/10 SECONDS AT
TERMINALS



MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO-214AA (SMB), DIMENSIONS
IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.093 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	LS12B	LS13B	LS14B	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	20	30	40	V
MAXIMUM RMS VOLTAGE	V_{RMS}	14	21	28	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	20	30	40	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1 (NOTE 1)	I_O	1.0			A
MAXIMUM OVERLOAD SURGE 8.3ms SINGLE HALF SINE-WAVE	I_{FSM}	25			A
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jL}$	35			°C/W
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jA}$	95			°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150			°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 125			°C

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

CHARACTERISTICS	SYMBOL	LS12B	LS13B	LS14B	UNITS
MAXIMUM FORWARD VOLTAGE AT 1.0A AND 25°C(NOTE 1)	V_F	0.395			V
MAXIMUM REVERSE CURRENT AT 25°C(NOTE 1)	I_R	0.5			mA
MAXIMUM REVERSE CURRENT AT 100°C(NOTE 1)	I_R	20.0			mA

NOTE: 1. PULSE TEST : 300µS PULSE WIDTH , 1% DUTY CYCLE

2. P.C.B. MOUNTED 0.55"×0.55 "(14×14 mm) 0.013mm THICK COPPER PAD AREAS

RATINGS AND CHARACTERISTIC CURVE LS12B THRU LS14B

FIG. 1 - FORWARD CURRENT DERATING CURVE

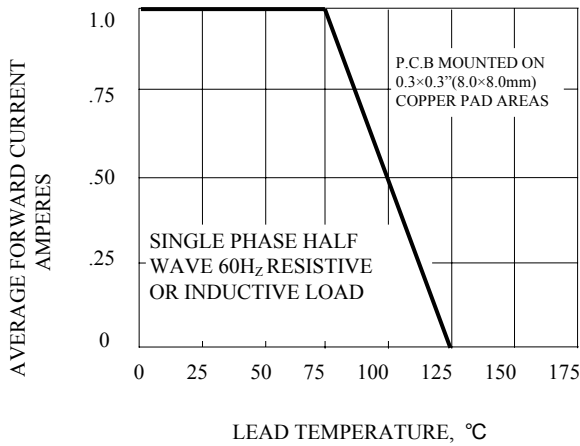


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

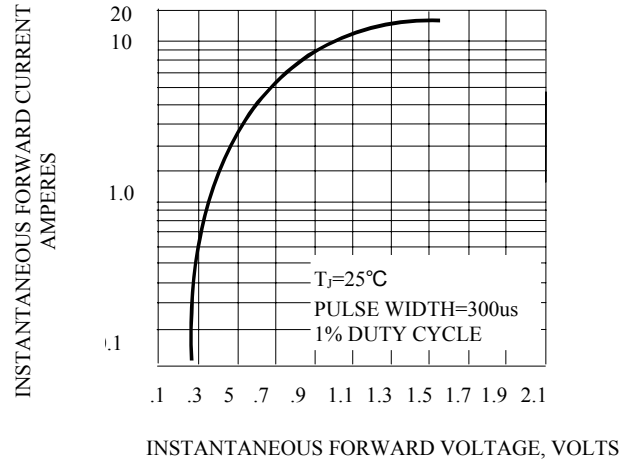


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

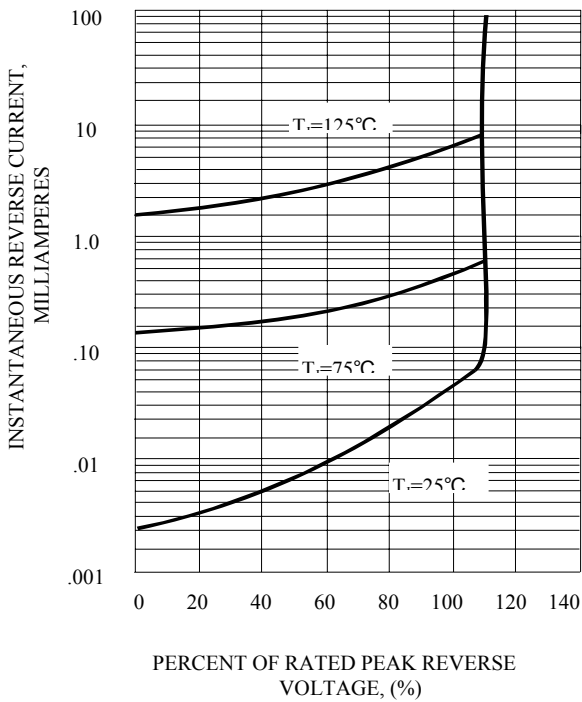


FIG. 4 - MAXIMUM NON-REPETITIVE

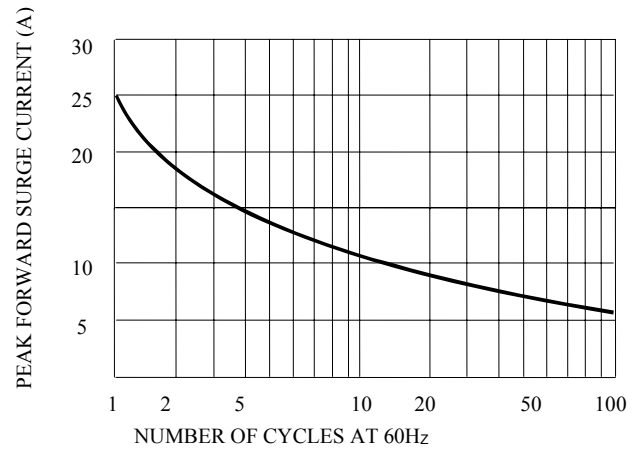


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

