



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 ULTRA FAST RECOVERY RECTIFIER

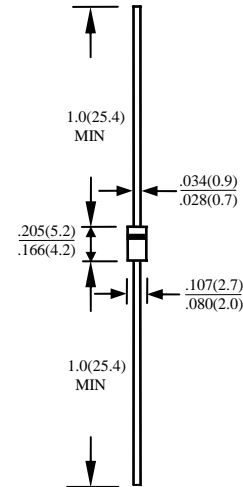
BYT54A-LFR THRU BYT54M-LFR

FEATURES

- FAST RECOVERY TIMES
- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- DIFFUSED JUNCTION
- LOW COST
- HIGH SURGE CURRENT CAPABILITY
- BEVEL ROUND CHIP, AVALANCHE OPERATION
- LEAD FREE

MECHANICAL DATA

- CASE: TRANSFER MOLDED, DO41, DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 0.34 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	BYT54A -LFR	BYT54B -LFR	BYT54D -LFR	BYT54G -LFR	BYT54J -LFR	BYT54K -LFR	BYT54M -LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375"(9.5mm) LEAD LENGTH AT $T_A=55^{\circ}C$	I_O	1.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	30							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	17							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50							$^{\circ}C/W$
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150							$^{\circ}C$
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150							$^{\circ}C$

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

CHARACTERISTICS	SYMBOL	BYT54A -LFR	BYT54B -LFR	BYT54D -LFR	BYT54G -LFR	BYT54J -LFR	BYT54K -LFR	BYT54M -LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.5							V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	5							μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	40							μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	100							nS

- NOTE:
1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. BOTH LEADS ATTACHED TO HEAT SINK 20x20x1t(mm) COPPER PLATE AT LEAD LENGTH 5mm
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

RATINGS AND CHARACTERISTIC CURVE BYT54A-LFR THRU BYT54M-LFR

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

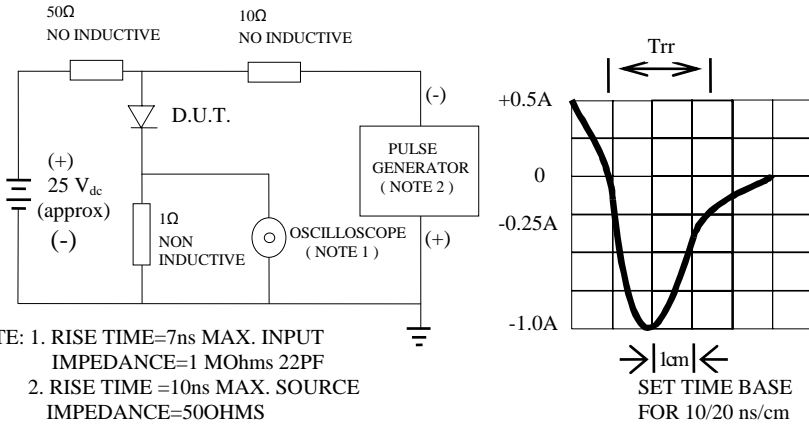


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

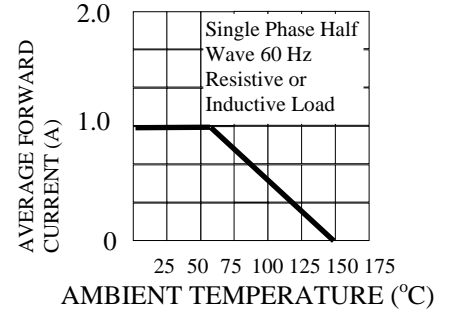


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

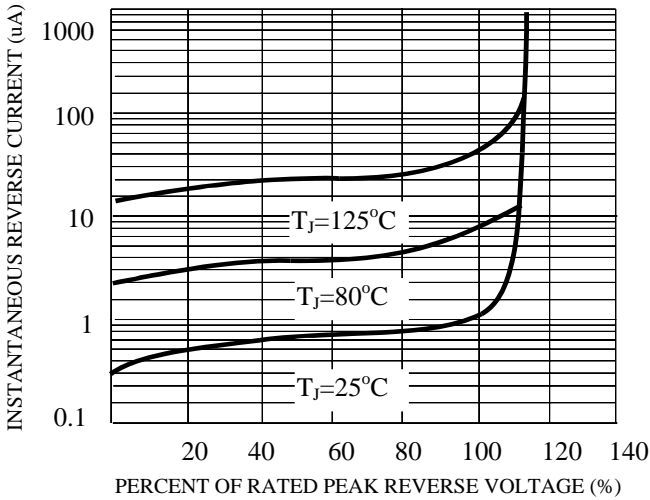


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

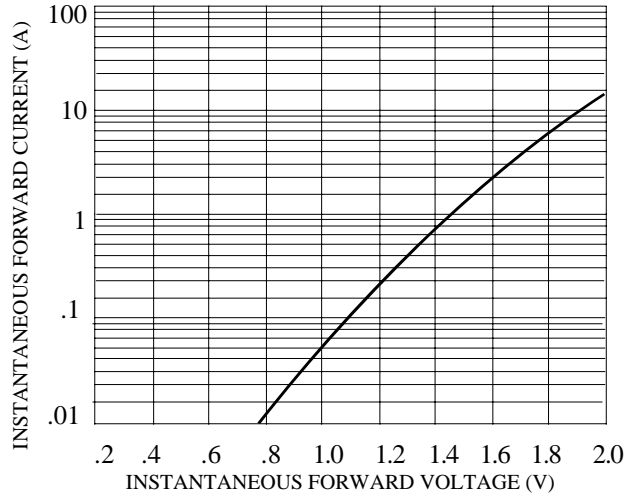


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

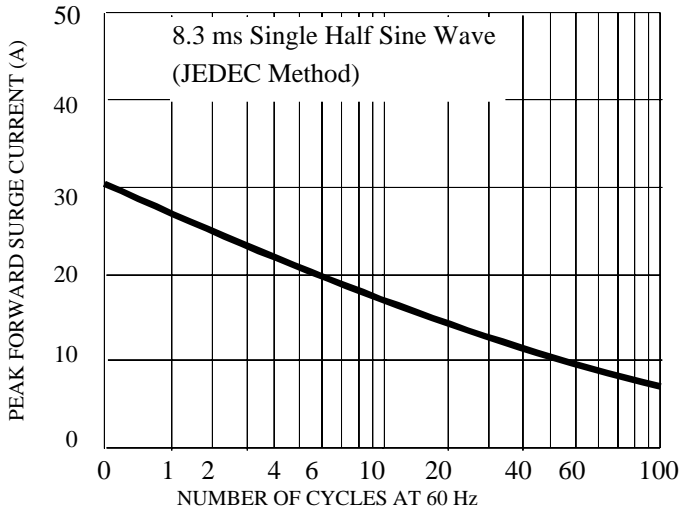


FIG. 6-TYPICAL JUNCTION CAPACITANCE

