



**FRONTIER
ELECTRONICS CO., LTD.**

**BYD33DP
THRU
BYD33MP**

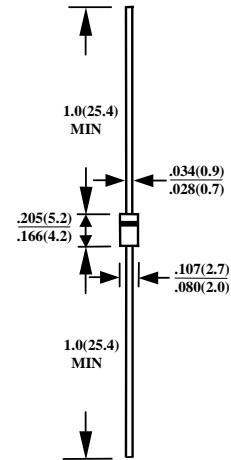
1.3A FAST RECOVERY PLASTIC RECTIFIER

FEATURES

- FAST RECOVERY TIMES
- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- DIFFUSED JUNCTION
- LOW COST
- HIGH SURGE CURRENT CAPABILITY

MECHANICAL DATA

- CASE : TRANSFER MOLDED
- LEADS : SOLDERABLE PER MIL-STD-202,METHOD 208
- POLARITY : CATHODE INDICATED BY COLOR BAND
- WEIGHT : 0.34 GRAMS



CASE-DO41
DIMENSIONS IN INCHES AND (MILLIMETERS)

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	BYD33DP	BYD33GP	BYD33JP	BYD33KP	BYD33MP	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT .375" (9.5mm) LEAD LENGTH AT TA=55°C	I_O	1.3					A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	35					A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	12					PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50					°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150					°C
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150					°C

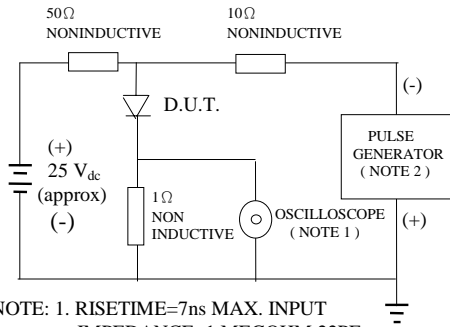
ELECTRICAL CHARACTERISTICS (A_T T_A =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	BYD33DP	BYD33GP	BYD33JP	BYD33KP	BYD33MP	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3					V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	5					μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	50					μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	150		250		300	nS

- NOTE : 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
2. BOTH LEADS ATTACHED TO HEATSINK 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 BYD33DP THRU BYD33MP

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



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

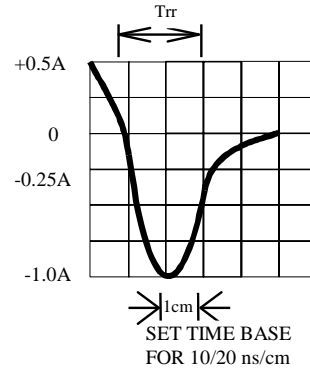


Fig. 2-MAXIMUM CURRENT DERATING CURVE

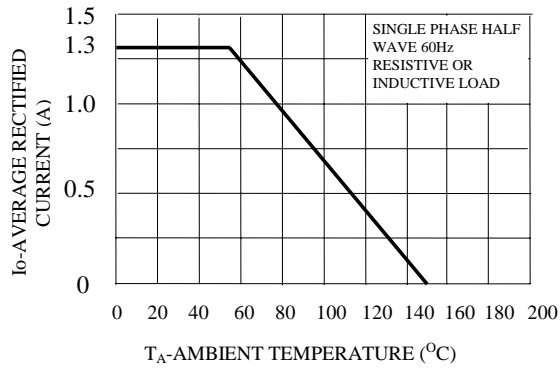


Fig. 3-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

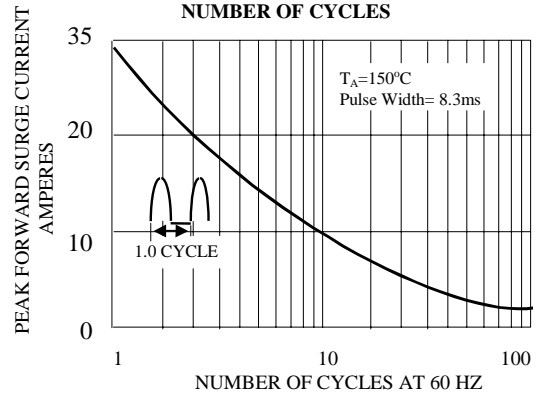


FIG. 4-TYPICAL JUNCTION CAPACITANCE

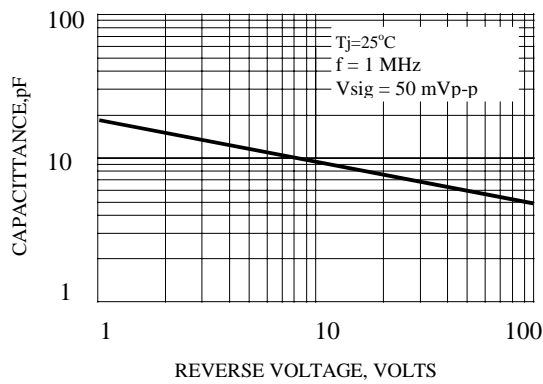


FIG. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

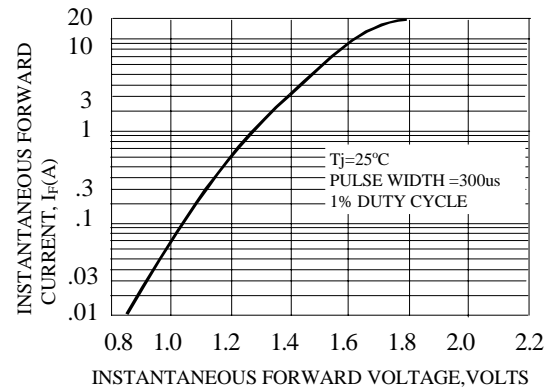


FIG. 6-TYPICAL REVERSE CHARACTERISTICS

