



TAYCHIPST

SOFT RECOVERY FAST-SWITCHING PLASTIC RECTIFIERS

BY500-100 THRU BY500-800

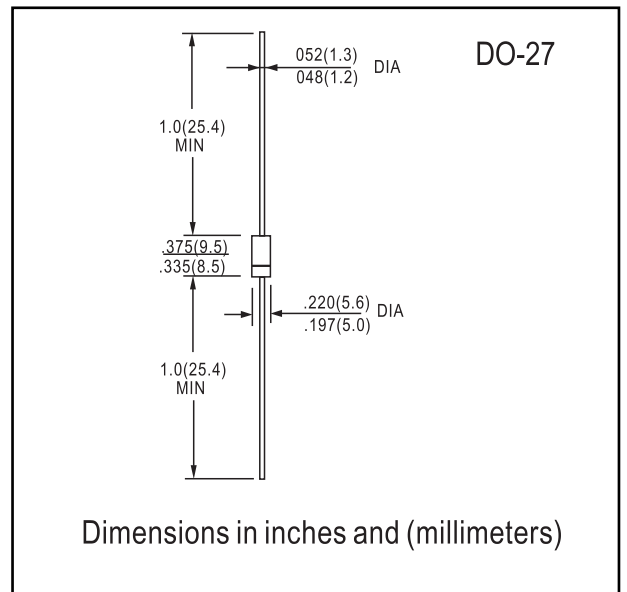
100V-800V 5.0A

FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260 /10 secods/.375 (9.5mm)lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

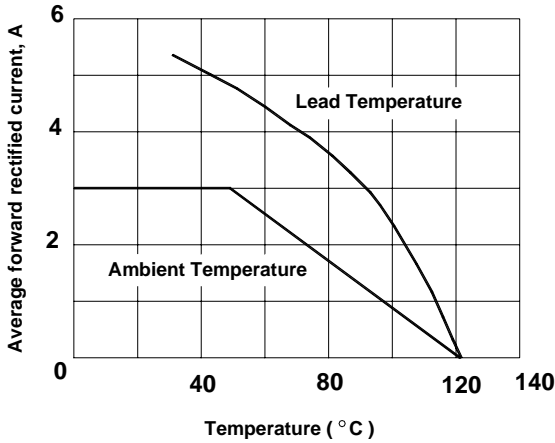
MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)								
PARAMETER	SYMBOL	BY500-100	BY500-200	BY500-400	BY500-600	BY500-800	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	400	600	800	V	
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	V	
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	V	
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_L = 45\text{ }^\circ\text{C}$	$I_{F(AV)}$	5.0						A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load at $T_A = 25\text{ }^\circ\text{C}$	I_{FSM}	200						A
Maximum repetitive peak forward surge	I_{FRM}	10						A
Operating junction temperature range	T_J	- 50 to + 125						$^\circ\text{C}$
Storage temperature range	T_{STG}	- 50 to + 150						$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	BY500-100	BY500-200	BY500-400	BY500-600	BY500-800	UNIT
Maximum instantaneous forward voltage	5.0 A	V_F	1.35					V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$	I_R	10					μA
	$T_A = 100\text{ }^\circ\text{C}$		1.0					mA
Maximum reverse recovery time		t_{rr}	200					ns
Maximum reverse recovery current	$I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$, $dI/dt = 50\text{ A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$	$I_{RM(REC)}$	2.0					A
Typical junction capacitance	4.0 V, 1 MHz	C_J	28					pF

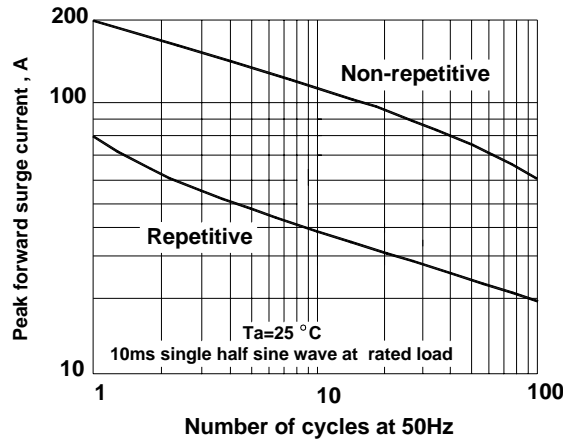


RATINGS AND CHARACTERISTIC CURVES BY500-100 THRU BY500-800

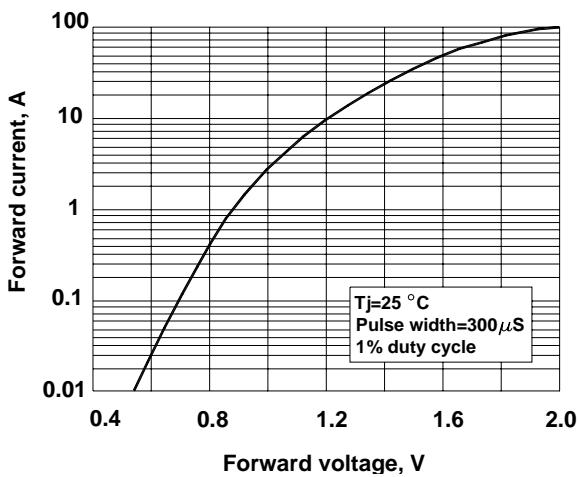
Forward current derating curve



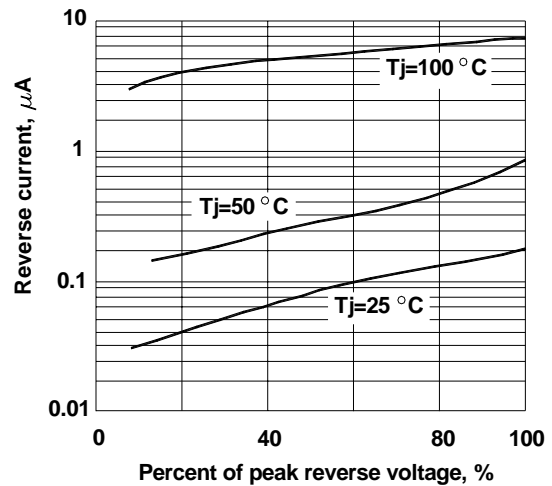
Maximum peak forward surge current



Typical Forward Characteristics



Typical Reverse Characteristics



Typical junction capacitance

