

EB16005S THRU EB1610S

16 Amperes High Power Super Fast Rectifiers
VOLTAGE : 50 TO 1000Volts

Features	Outline
• Low power loss, high efficiency. • High surge current capability. • Super fast recovery time for switching mode application. • Low power loss. • Glass passivated chip junctions. • Suffix "G" indicates Halogen-free part, ex. EB16005SG. • Lead-free parts meet environmental standards of MIL-STD-19500 /228	D²PAK(TO-263) Dimensions in inches and (millimeters)
Mechanical data	
• Epoxy : UL94-V0 rated flame retardant. • Case : Molded plastic, TO-263 / D²PAK • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity: Indicated by cathode band. • Mounting Position : Any. • Weight : Approximated 1.70 gram.	

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	EB16005S	EB1601S	EB1602S	EB1604S	EB1606S	EB1608S	EB1610S	UNIT
Making code		EB16005S	EB1601S	EB1602S	EB1604S	EB1606S	EB1608S	EB1610S	
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	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	
Maximum Forward Voltage@16A, $T_A = 25^{\circ}\text{C}$	V_F	0.95			1.30	1.70			V
Maximum reverse recovery time(1) @ $T_J = 25^{\circ}\text{C}$	T_{rr}	35			50				ns
Operating Temperature	T_J	-50 ~ +150							$^{\circ}\text{C}$

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_O			16	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			300	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			1.0	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				300	
Typical junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		62		pF



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Rating and characteristic curves

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

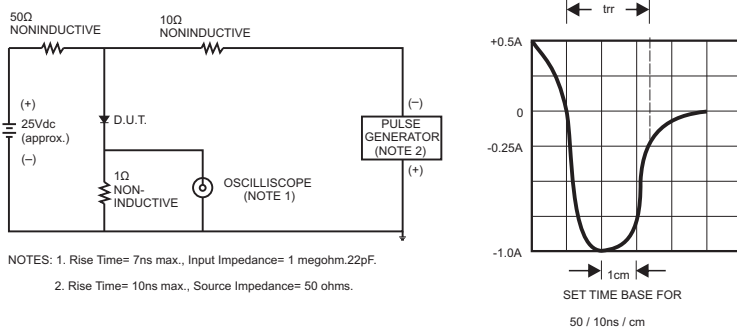


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

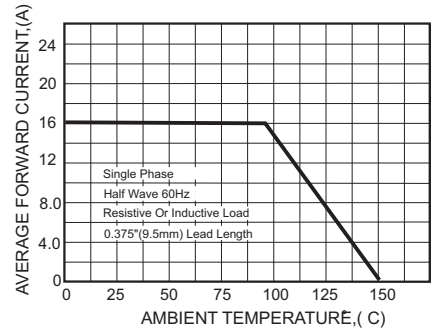


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

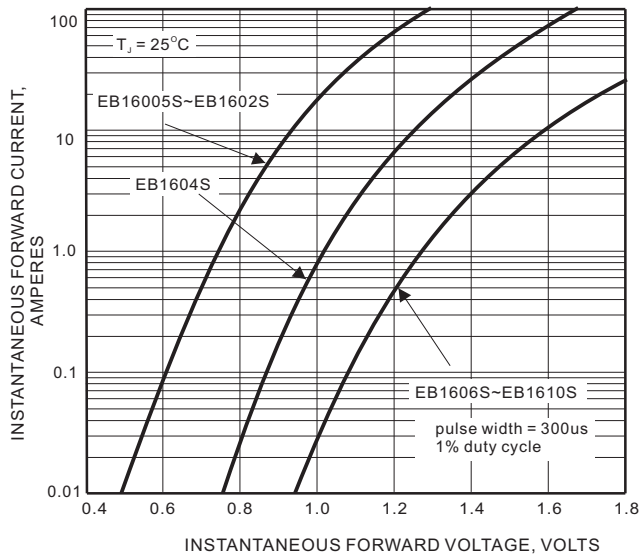


FIG.4-TYPICAL REVERSE CHARACTERISTICS

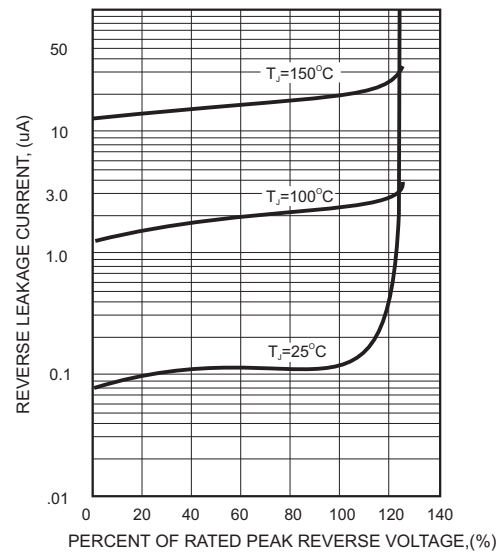


FIG.5-MAXIMUM NON-REPETITIVE

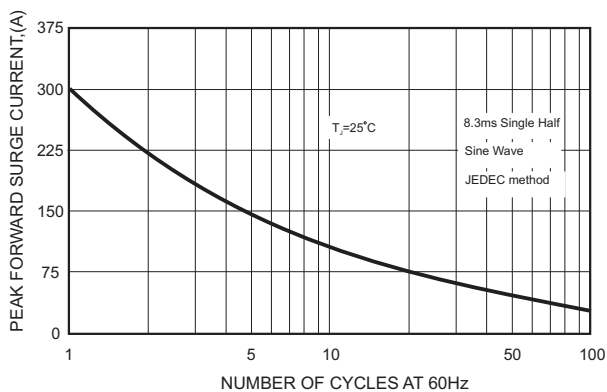


FIG.6-TYPICAL JUNCTION CAPACITANCE

