

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

RATINGS	SYMBOL	3SM2	3SM4	3SM6	3SM8	3SM0	UNIT
Working reverse voltage	V_{RWM}	200	400	600	800	1000	V
Average forward current (@ 55°C, lead length 0.375")	$I_{F(AV)}$	5.0					A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	I_{FRM}	25					A
Non-repetitive surge current ($t_p = 8.3ms$, @ V_R @ T_{jmax})	I_{FSM}	100					A
($t_p = 8.3ms$, @ V_R & 25°C)	I_{FSM}	150					A
Storage temperature range	T_{STG}	-65 to +175					°C
Operating temperature range	T_{OP}	-65 to +175					°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

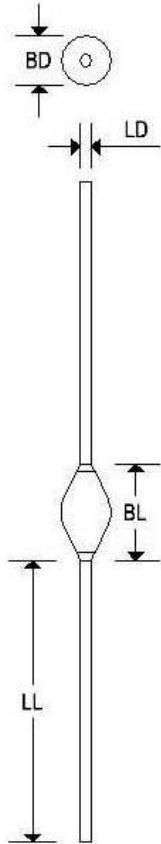
RATINGS	SYMBOL	3SM2	3SM4	3SM6	3SM8	3SM0	UNIT
Average forward current (sine wave)							
-max. $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	3.0					A
-max. $L = 3/8"$; $T_L = 55^\circ\text{C}$	$I_{F(AV)}$	5.0					A
I^2t for fusing ($t = 8.3ms$) Max.	I^2t	42					A ² s
Forward voltage drop max. @ $I_F = 3.0A$, $T_j = 25^\circ\text{C}$	V_F	1.0					V
Reverse current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$	I_R	1.0					μA
@ V_{RWM} , $T_j = 125^\circ\text{C}$	I_R	60					μA
Reverse recovery time max. 0.5A I_F to 1.0A I_R . Recovers to 0.25A $I_{RM(REC)}$	t_{rr}	2.0					μs
Junction capacitance typ. @ $V_R = 5V$, $f = 1\text{MHz}$	C_j	92					pF
Thermal resistance-junction to lead Lead Length = 0.375"	$R_{\theta JL}$	22					°C/W
Lead Length = 0"	$R_{\theta JL}$	4					°C/W
Thermal resistance – junction to amb. on 0.06" thick pcb. 1 oz. copper	$R_{\theta JA}$	47					°C/W

3SM SERIES

RECTIFIER DIODES

MECHANICAL CHARACTERISTICS

Case:	Digi Y
Marking:	Body Painted, Alpha Numeric
Polarity:	Cathode Band



	Digi Y			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.115	0.180	2.920	4.570
BL	0.130	0.300	3.300	7.620
LD	0.036	0.042	0.920	1.070
LL	0.900	1.300	22.860	33.020

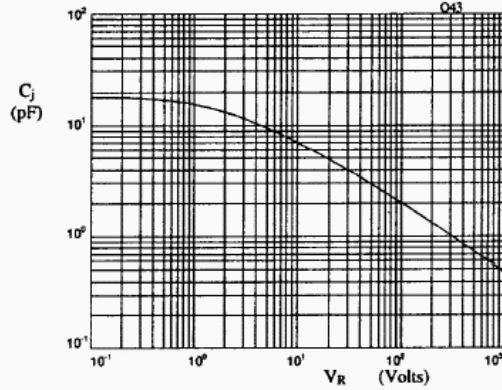


Fig 2. Typical junction capacitance as a function of reverse voltage.

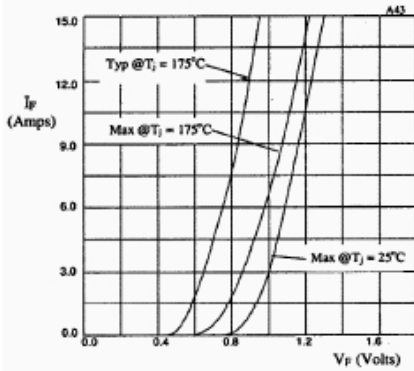


Fig 3. Forward voltage drop as a function of forward current.

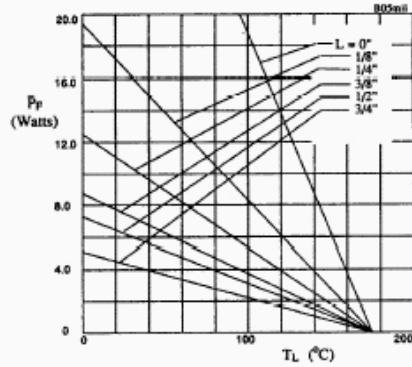


Fig 4. Maximum power versus lead temperature.

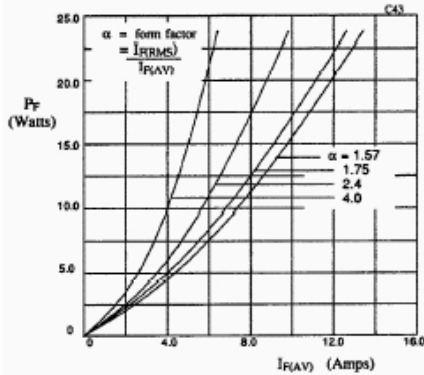


Fig 5. Forward power dissipation as a function of forward current, for sinusoidal operation.

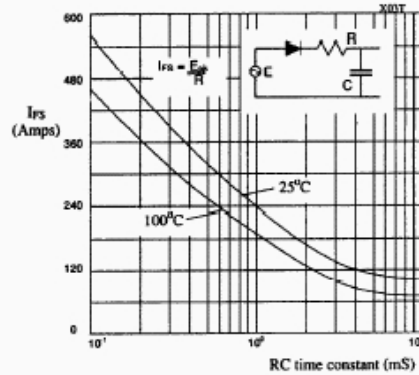


Fig 6. Maximum ratings for capacitive loads.