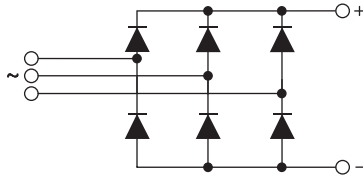


## Three Phase Bridge Power Modules


**D-34A**


### FEATURES

- Universal, 3 way terminals: push-on, wrap around or solder
- High thermal conductivity package, electrically insulated case
- Center hole fixing
- Excellent power/volume ratio
- UL E300359 approved
- Gold plated terminals solderable using lead (Pb)-free solder; solder alloy Sn/Ag/Cu (SAC305); solder temperature 260 to 275 °C
- RoHS compliant
- Designed and qualified for industrial and consumer level



### DESCRIPTION

A range of extremely compact, encapsulated three phase bridge rectifiers offering efficient and reliable operation. They are intended for use in general purpose and instrumentation applications.

MAJOR RATINGS AND CHARACTERISTICS			
PARAMETER	26MT	36MT	UNITS
$I_o$	25	35	A
	at $T_C$	70	°C
$I_{FSM}$	at 50 Hz	360	A
	at 60 Hz	375	
$I^2t$	at 50 Hz	635	A <sup>2</sup> s
	at 60 Hz	580	
$V_{RRM}$	100 to 1600		V
$T_J$	- 55 to 150		°C

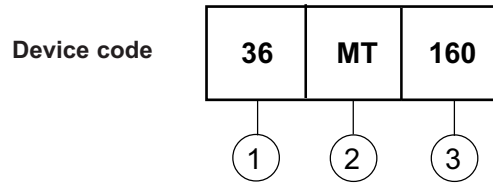
### ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS				
TYPE NUMBER	VOLTAGE CODE	$V_{RRM}$ , MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE V	$V_{RSM}$ , MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE V	$I_{RRM}$ MAXIMUM AT $T_J$ MAXIMUM mA
26MT../36MT..	10	100	150	2
	20	200	275	
	40	400	500	
	60	600	725	
	80	800	900	
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

FORWARD CONDUCTION							
PARAMETER	SYMBOL	TEST CONDITIONS			26MT	36MT	UNITS
Maximum DC output current at $T_C$	$I_O$	120° rect. conduction angle			25	35	A
					70	60	°C
Maximum peak, one-cycle non-repetitive forward current Initial $T_J = T_J$ maximum	$I_{FSM}$	t = 10 ms	No voltage reappplied	Initial $T_J = T_J$ maximum	360	475	A
		t = 8.3 ms			375	500	
		t = 10 ms	100 % $V_{RRM}$ reappplied		300	400	
		t = 8.3 ms			314	420	
Maximum $I^2t$ for fusing Initial $T_J = T_J$ maximum	$I^2t$	t = 10 ms	No voltage reappplied		635	1130	A <sup>2</sup> s
		t = 8.3 ms			580	1030	
		t = 10 ms	100 % $V_{RRM}$ reappplied		450	800	
		t = 8.3 ms			410	730	
Maximum $I^2\sqrt{t}$ for fusing	$I^2\sqrt{t}$	$I^2t$ for time $t_x = I^2\sqrt{t} \times \sqrt{t_x}$ ; $0.1 \leq t_x \leq 10$ ms, $V_{RRM} = 0$ V			6360	11 300	A <sup>2</sup> √s
Low-level of threshold voltage	$V_{F(TO)1}$	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)})$ , at $T_J$ maximum			0.88	0.86	V
High-level of threshold voltage	$V_{F(TO)2}$	$(I > \pi \times I_{F(AV)})$ , at $T_J$ maximum			1.13	1.03	
Low-level forward slope resistance	$r_{t1}$	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)})$ , at $T_J$ maximum			7.9	6.3	mΩ
High-level forward slope resistance	$r_{t2}$	$(I > \pi \times I_{F(AV)})$ , at $T_J$ maximum			5.2	5.0	
Maximum forward voltage drop	$V_{FM}$	$T_J = 25$ °C, $I_{FM} = 40$ Apk - per single junction			1.26	1.19	V
Maximum DC reverse current	$I_{RRM}$	$T_J = 25$ °C, per junction at rated $V_{RRM}$			100		μA
RMS isolation voltage	$V_{INS}$	$T_J = 25$ °C, all terminal shorted; f = 50 Hz, t = 1 s			2700		V

THERMAL AND MECHANICAL SPECIFICATIONS							
PARAMETER	SYMBOL	TEST CONDITIONS			26MT	36MT	UNITS
Maximum junction temperature range	$T_J$				- 55 to 150		°C
Maximum storage temperature range	$T_{Stg}$				- 55 to 150		
Maximum thermal resistance, junction to case	$R_{thJC}$	DC operation per bridge (based on total power loss of bridge)			1.42	1.35	K/W
Maximum thermal resistance, case to heatsink	$R_{thCS}$	Mounting surface, smooth, flat and greased			0.2	0.2	
Approximate weight					20		g
Mounting torque ± 10 %		Bridge to heatsink with screw M4			2.0		Nm

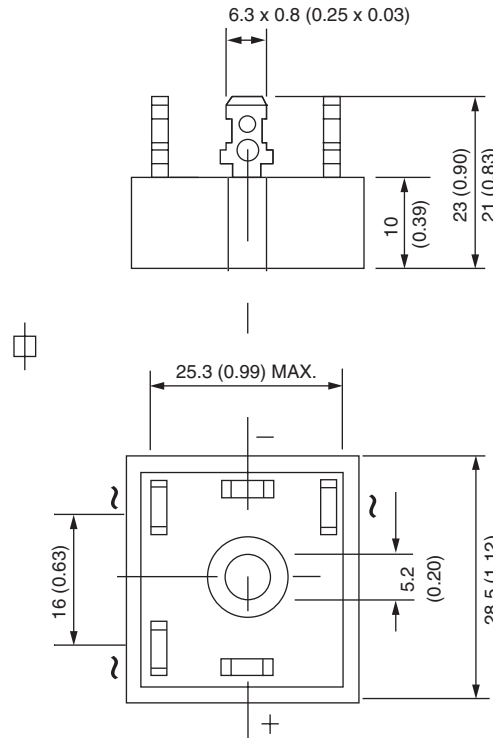
### ORDERING INFORMATION TABLE



- 1 - Current rating code:
 

26 = 25 A (Avg)  
 36 = 35 A (Avg)
- 2 - Basic part number
- 3 - Voltage code (code x 10 =  $V_{RRM}$ )

### OUTLINE DIMENSIONS in millimeters (inches)



Suggested plugging force:  
400 N maximum; axially applied to faston terminals

Not to scale

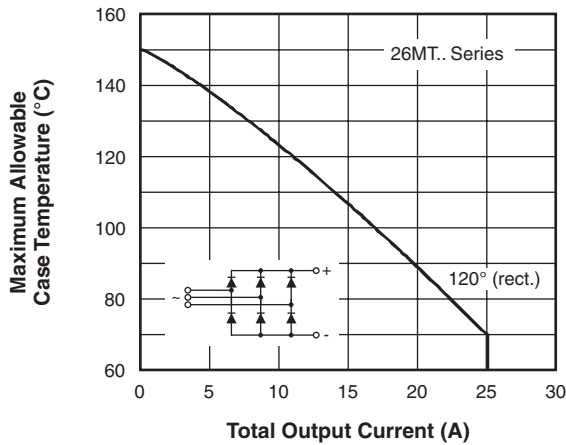


Fig. 1 - Current Ratings Characteristics

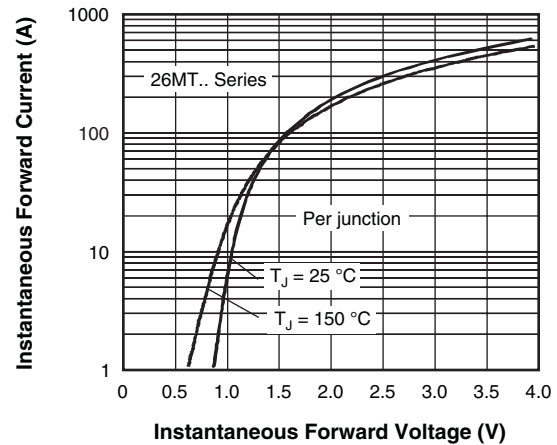


Fig. 2 - Forward Voltage Drop Characteristics

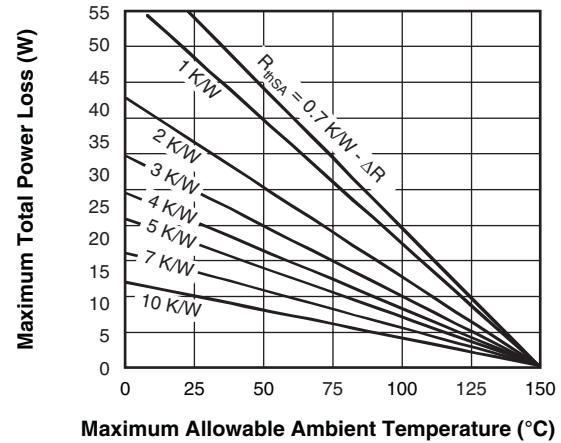
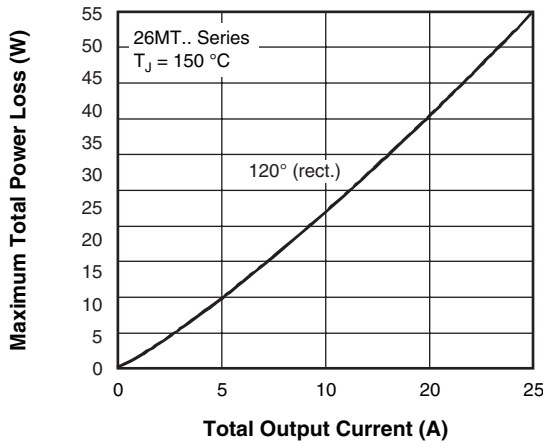


Fig. 3 - Total Power Loss Characteristics

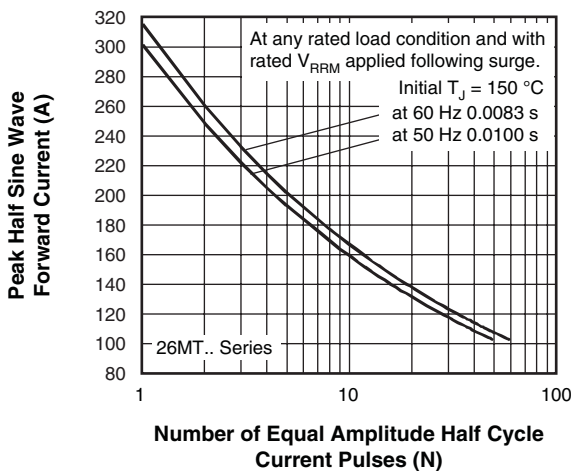


Fig. 4 - Maximum Non-Repetitive Surge Current

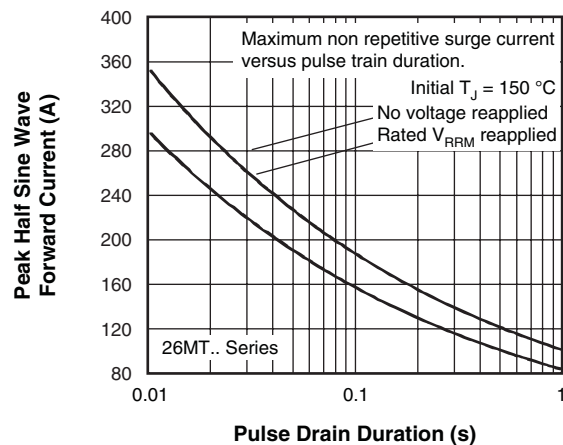


Fig. 5 - Maximum Non-Repetitive Surge Current

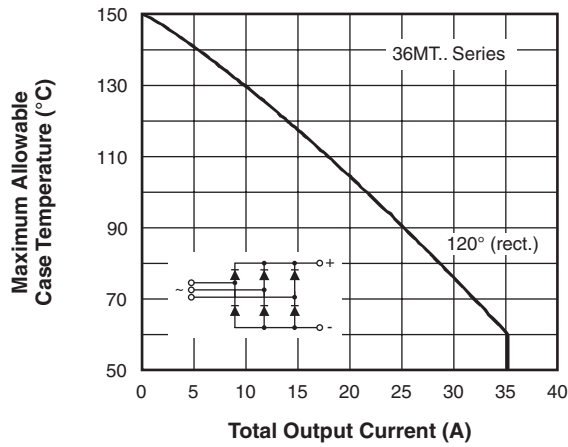


Fig. 6 - Current Ratings Characteristics

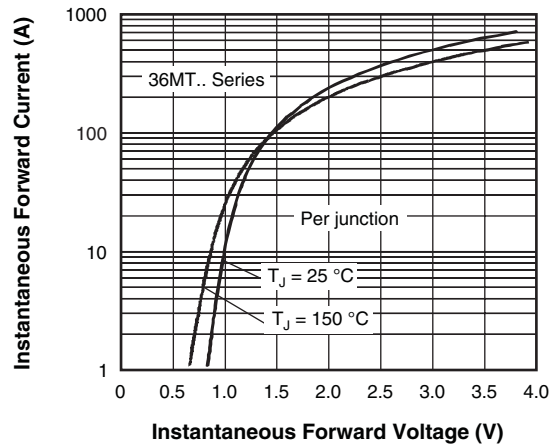


Fig. 7 - Forward Voltage Drop Characteristics

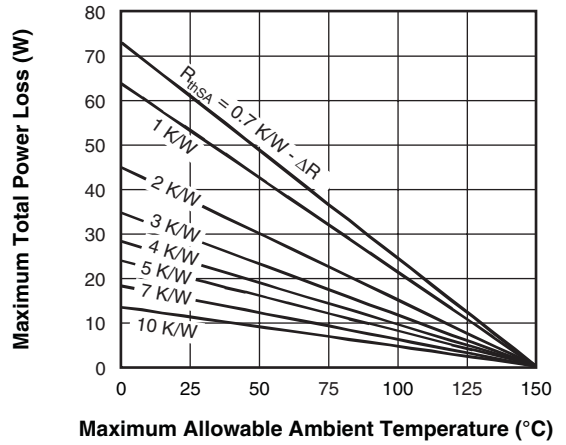
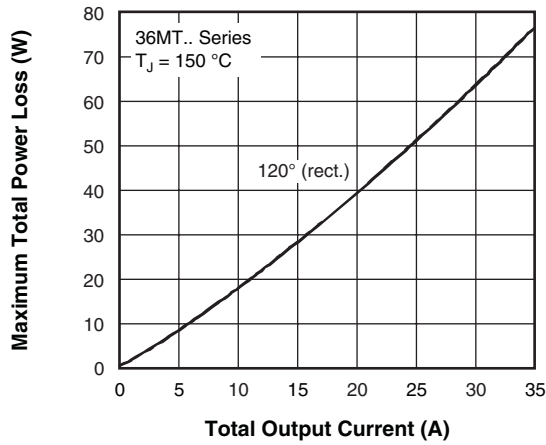


Fig. 8 Total Power Loss Characteristics

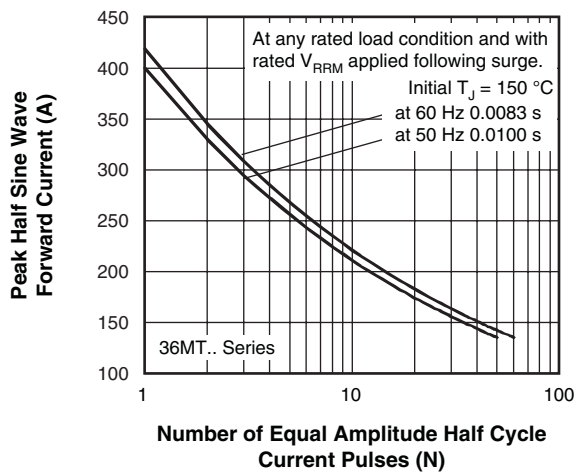


Fig. 9 - Maximum Non-Repetitive Surge Current

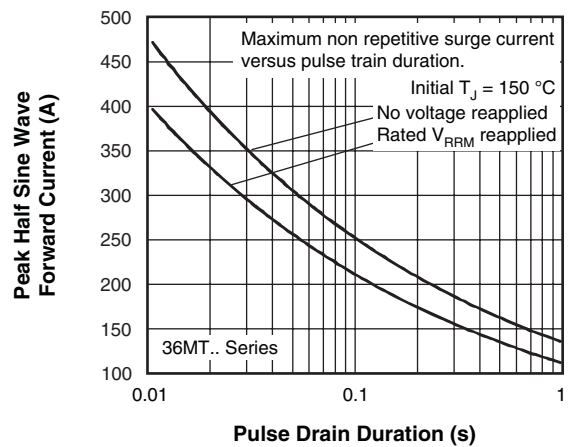


Fig. 10 - Maximum Non-Repetitive Surge Current

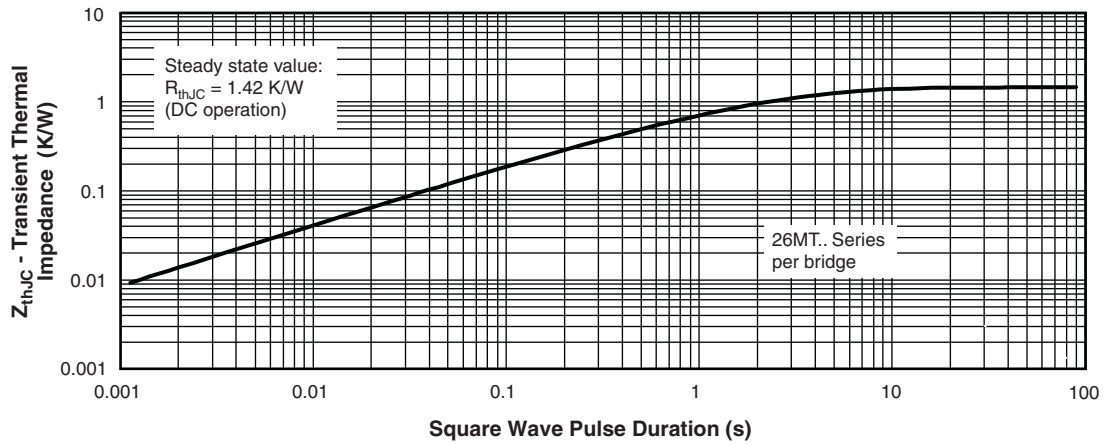


Fig. 11 - Thermal Impedance  $Z_{thJC}$  Characteristics

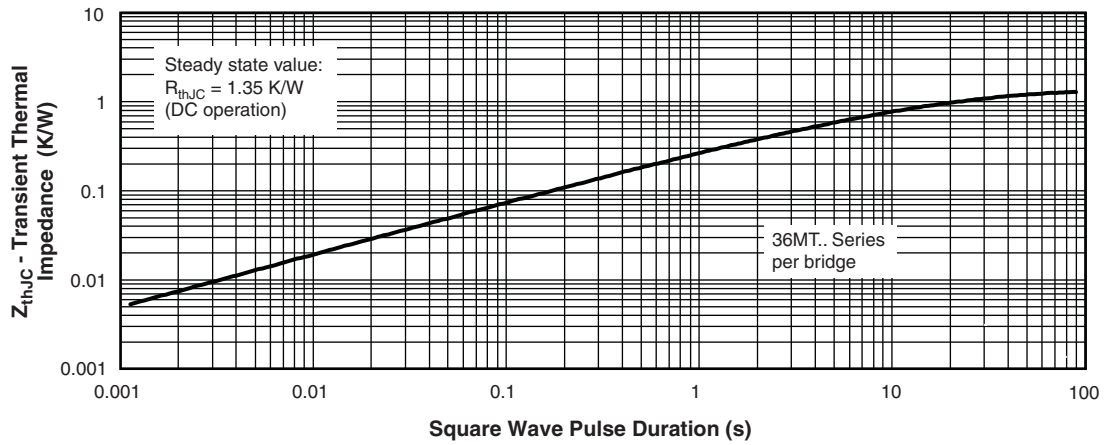


Fig. 12 Thermal Impedance  $Z_{thJC}$  Characteristics



## Notice

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