

MDD142

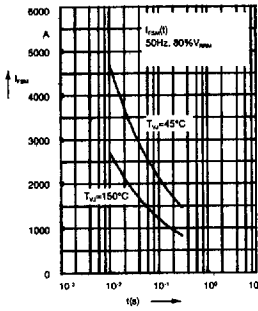


Fig. 1 Surge overload current I_{SM} : Crest value, t : duration

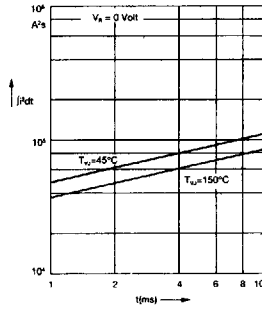


Fig. 2 $jPdt$ versus time (1-10ms)

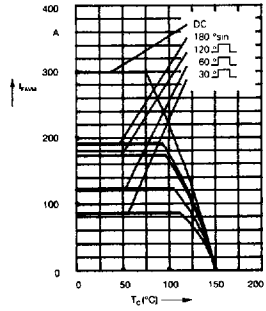


Fig. 2a Maximum forward current at case temperature

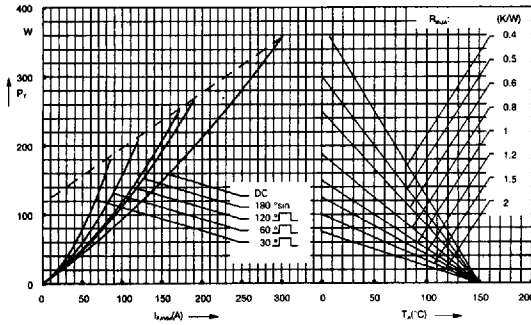


Fig. 3 Power dissipation versus forward current and ambient temperature (per diode)

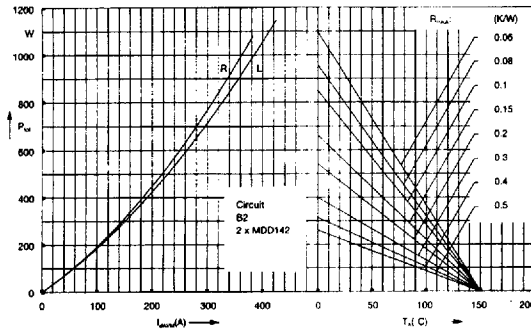


Fig. 4 Single phase rectifier bridge: Power dissipation versus direct output current and ambient temperature
R=resistive load
L=inductive load

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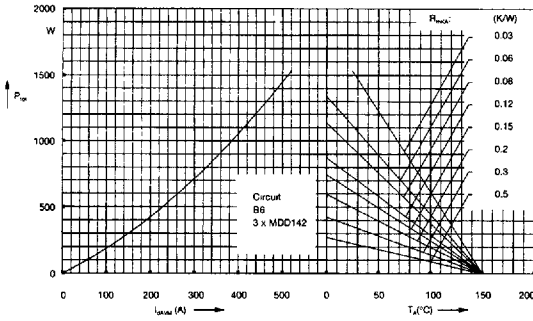


Fig. 5 Three phase rectifier bridge: Power dissipation versus direct output current and ambient temperature

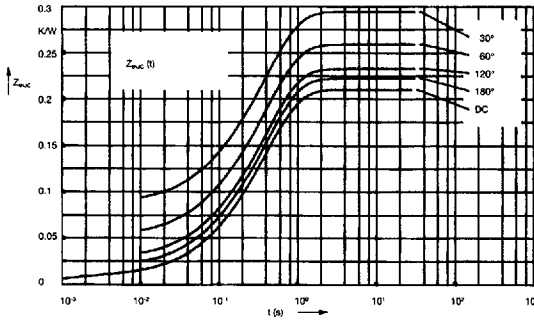


Fig. 6 Transient thermal impedance junction to case (per diode)

$R_{\theta JC}$ for various conduction angles d:

d	$R_{\theta JC}$ (K/W)
DC	0.210
180°	0.223
120°	0.233
60°	0.260
30°	0.295

Constants for $Z_{\theta JC}$ calculation:

i	$R_{\theta i}$ (K/W)	t_i (s)
1	0.0087	0.001
2	0.0163	0.065
3	0.185	0.4

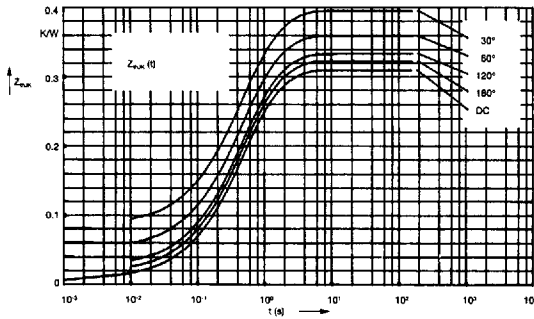


Fig. 7 Transient thermal impedance junction to heatsink (per diode)

$R_{\theta JK}$ for various conduction angles d:

d	$R_{\theta JK}$ (K/W)
DC	0.31
180°	0.323
120°	0.333
60°	0.360
30°	0.395

Constants for $Z_{\theta JK}$ calculation:

i	$R_{\theta i}$ (K/W)	t_i (s)
1	0.0087	0.001
2	0.0163	0.065
3	0.185	0.4
4	0.1	1.29