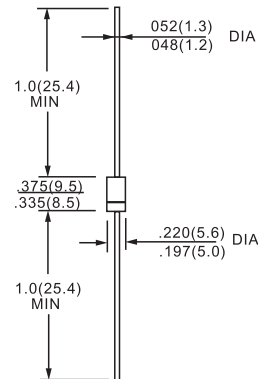




FEATURES

- VERY LOW CONDUCTION LOSSES
- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD AND REVERSE RECOVERY TIMES

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		200	V
I_{FRM}	Repetitive peak forward current *	$t_p=5 \mu s$ $F=1KHz$	110	A
$I_F (AV)$	Average forward current*	$T_a = 75^\circ C$ $\delta = 0.5$	3	A
I_{FSM}	Surge non repetitive forward current	$t_p = 10ms$ Sinusoidal	70	A
T_{stg}	Storage temperature range		- 65 to + 150	$^\circ C$
T_j	Maximum operating junction temperature		150	$^\circ C$
T_L	Maximum lead temperature for soldering during 10s at 4mm from case		230	$^\circ C$

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_R^*	Reverse leakage current	$T_j = 25^\circ C$	$V_R = V_{RRM}$		10	μA
		$T_j = 100^\circ C$			0.5	mA
V_F^{**}	Forward voltage drop	$T_j = 25^\circ C$	$I_F = 9A$		1.2	V
		$T_j = 100^\circ C$	$I_F = 3A$		0.78 0.85	

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{rr}	$T_j = 25^\circ C$	$I_F = 1A$	$dI_F/dt = - 50A/\mu s$			35	ns
Q_{rr}	$T_j = 25^\circ C$	$I_F = 3A$	$dI_F/dt = - 20A/\mu s$		15		nC
t_{fr}	$T_j = 25^\circ C$	$I_F = 3A$	$dI_F/dt = - 50A/\mu s$		20		ns
V_{FP}	$T_j = 25^\circ C$	$I_F = 3A$	$dI_F/dt = - 50A/\mu s$		5		V

RATINGS AND CHARACTERISTIC CURVES BYW98-200

Fig. 1: Average forward power dissipation versus average forward current.

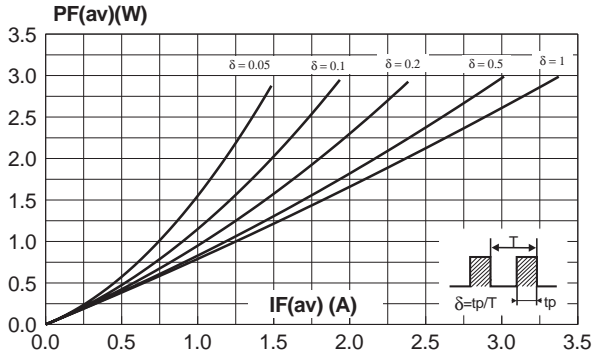


Fig. 3: Thermal resistance versus lead length.

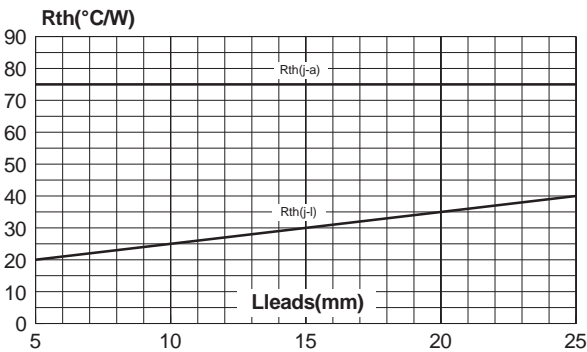


Fig. 5: Forward voltage drop versus forward current (maximum values).

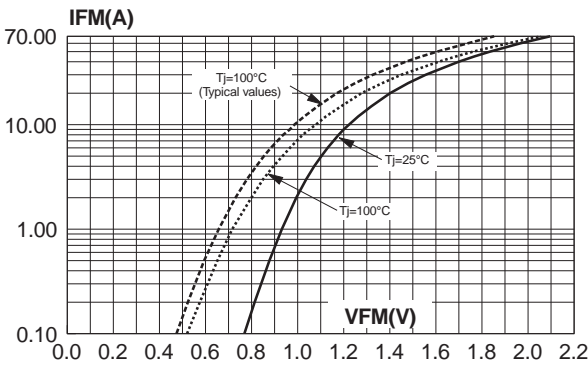


Fig. 7: Reverse recovery time versus dIF/dt.

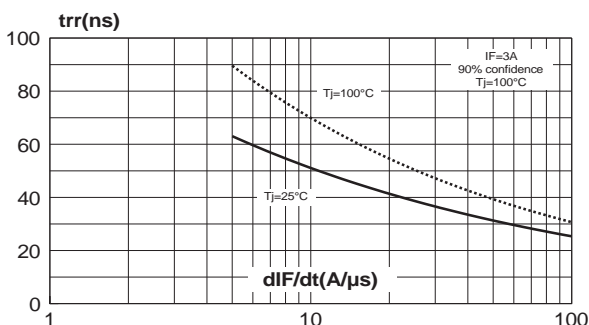


Fig. 2: Average forward current versus ambient temperature ($\delta=0.5$).

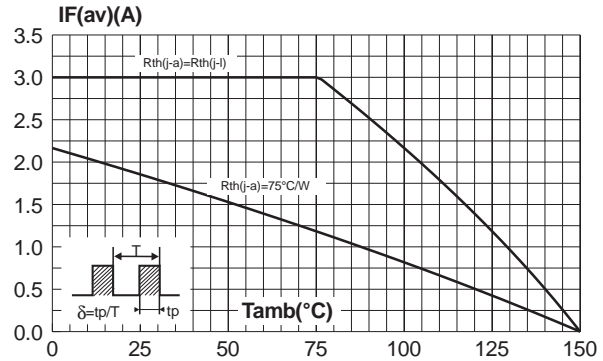


Fig. 4: Variation of thermal impedance junction to ambient versus pulse duration (recommended pad)

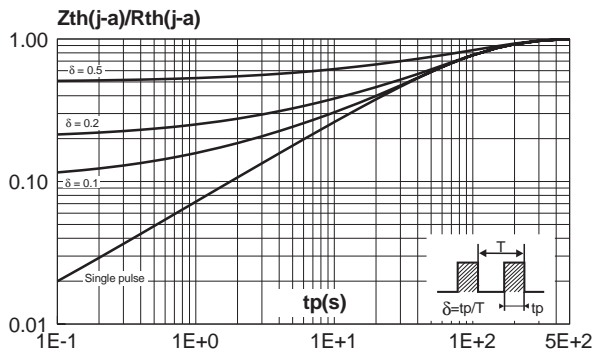


Fig. 6: Junction capacitance versus reverse voltage applied (typical values).

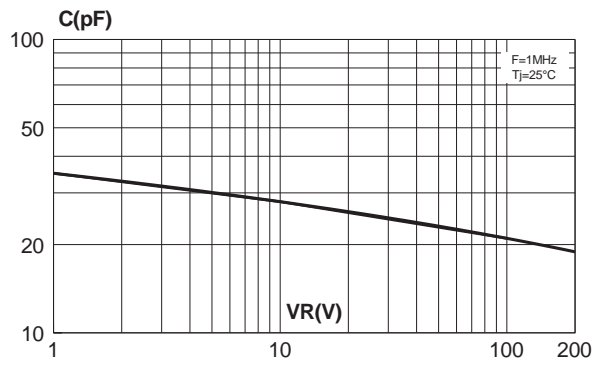


Fig. 8: Peak reverse recovery current versus dIF/dt.

