



SCD2160

Power Rectifier Diodes

Features

- Low forward voltage drop
- High reverse voltage
- Hermetic metal cases with ceramic insulators

Typical Applications

- All purpose high power rectifier diodes
- High power resistance welding equipment
- Non-controllable and half-controllable rectifiers
- Controlled rectifiers

$I_{F(AV)}$	2160 A
V_{RRM}	200~1600 V
I_{FSM}	19 kA
I^2t	1805 $10^3 A^2S$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT	
				Min	Type	Max		
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Double side cooled,	$T_c=55^{\circ}C$	190			2550	A
			$T_c=85^{\circ}C$				2160	
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms $V_{RSM}=V_{RRM}+100V$	190	200		1600	V	
I_{RRM}	Repetitive peak current	$V_{RM}=V_{RRM}$	190			50	mA	
I_{FSM}	Surge forward current	10ms half sine wave	190			19	kA	
I^2t	I^2T for fusing coordination	$V_R=0.6V_{RRM}$				1805	$A^2s \cdot 10^3$	
V_{FO}	Threshold voltage		190			0.86	V	
r_F	Forward slop resistance					0.165	mΩ	
V_{FM}	Peak on-state voltage	$I_{FM}=3000A, F=18kN$	190			1.36	V	
Q_{rr}	Recovery charge	$I_{FM}=2000A, tp=2000\mu s, di/dt=-20A/\mu s,$ $V_R=50V$	190		1900		μC	
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 18.0kN				0.028	$^{\circ}C/W$	
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.0075		
F_m	Mounting force			10		20	kN	
T_{stg}	Stored temperature			-40		190	$^{\circ}C$	
W_t	Weight				320		g	

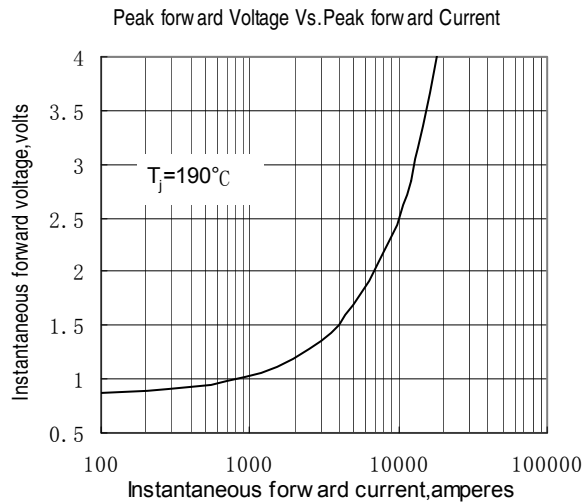


Fig.1

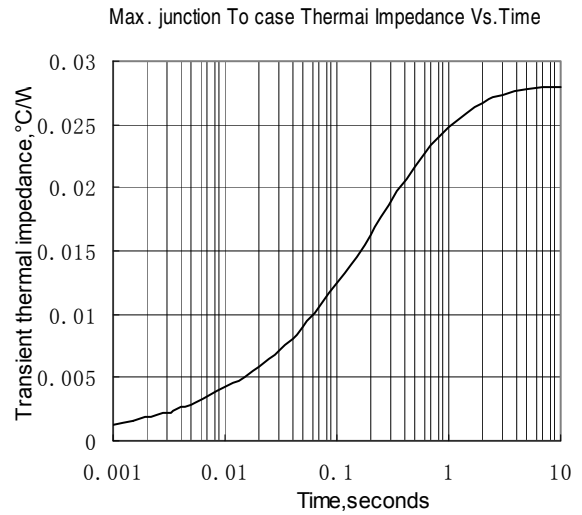


Fig.2

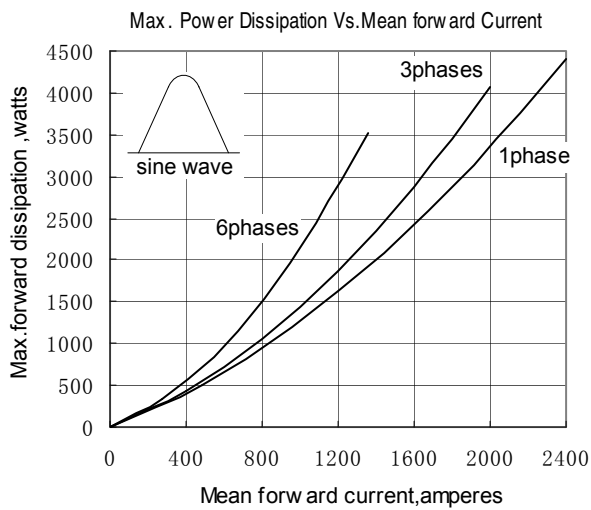


Fig.3

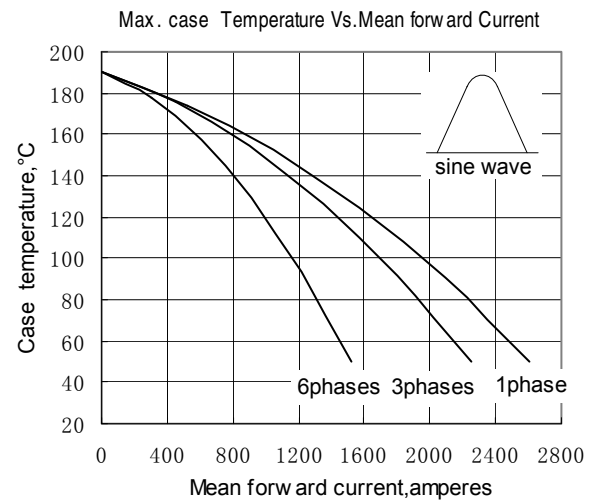


Fig.4

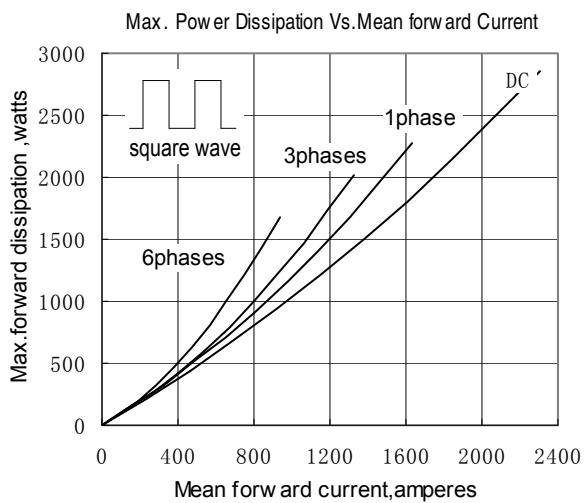


Fig.5

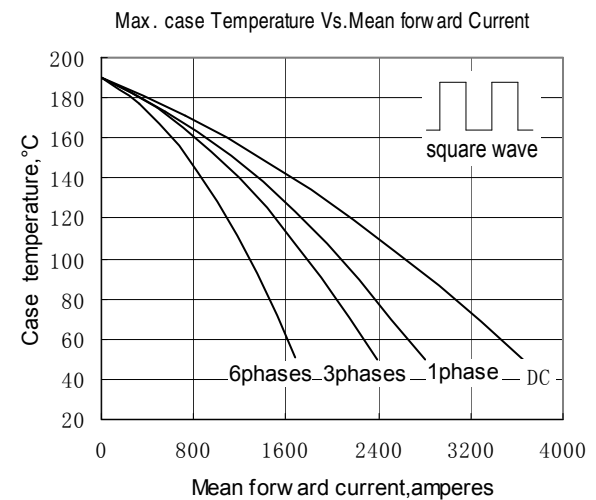


Fig.6

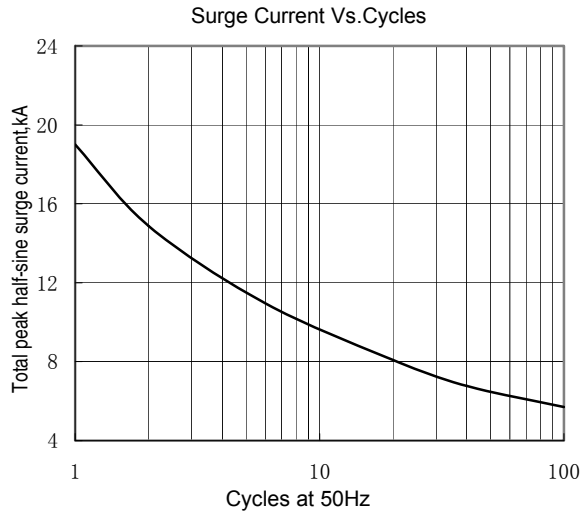


Fig.7

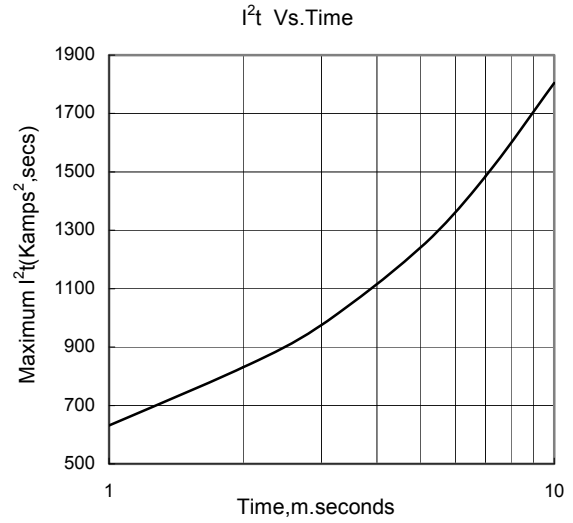


Fig.8

Outline:

