www.scomes.com

SCD5280

Power Rectifier Diodes

GENERAL PURPOSE HIGH POWER RECTIFIER

Features:

- **All Diffused Structure**
- **High Surge rating**
- **Soft Reverse Recovery**
- **Rugged Ceramic Hermetic Package**
- **Pressure Assembled Device**

Typical Applications:

- **Rectifier for Drives Applications**
- **Medium voltage converters**
- **Pulsed power applications**
- **Crowbar Applications**

ELECTRICAL CHARACTERISTICS AND RATINGS

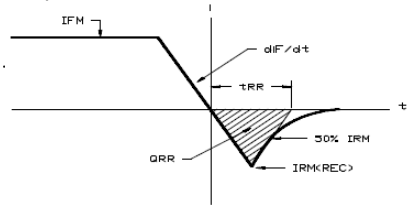
Reverse Blocking

V_{RRM} (1)	V_{RSM} (1)
2400	2500

V_{RRM} = Repetitive peak reverse voltage
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	I_{RRM}	15 mA 75mA (3)

Notes:
All ratings are specified for Tj=25 °C unless otherwise stated.
(1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range -40 to +150 °C.
(2) 10 msec. max. pulse width
(3) Maximum value for Tj = 150 °C.
(4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		5282		A	Sinewave,180°conduction,T_c=55°C
RMS value of on-state current	$I_{F(RMS)M}$		9830		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		60		kA	T_j=25°C, V_R=0,5V_{RRM}, t_p=10ms
I square t	I^2t		18000		kA^2s	10 msec
Peak on-state voltage	V_F		1.35		V	I_F =6000 A; T_j =160°C
Threshold voltage	V_{FO}		0.97		V	T_j=160°C
Forward slope resistance	r_F		0.064		mΩ	T_j=160°C
Reverse Recovery Current (4)	$I_{RM(REC)}$		-		A	I_{FM} = 1000 A; dI_F/dt = 100 A/µs, T_j = T_j MAX.
Reverse Recovery Charge (4)	Q_{rr}		-		µC	
Reverse Recovery Time (4)	t_{rr}		-	-	µs	

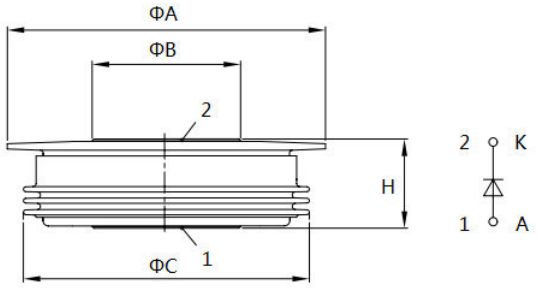
* For guaranteed maximum values, contact factory

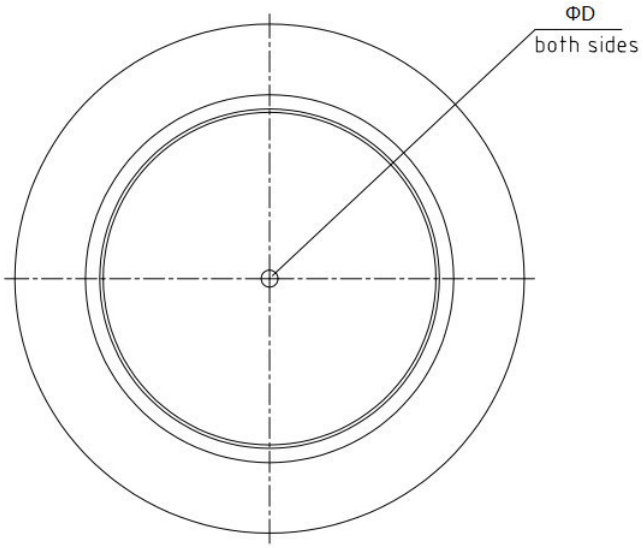
THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-55	+160		°C	
Storage temperature	T_{stg}	-55	+190		°C	
Thermal resistance - junction to case	$R_{\Theta (j-c)}$		0.011		K/W	Double side cooling Single sided cooled
Thermal resistance - case to sink	$R_{\Theta (c-s)}$		0.022		K/W	Double side cooling Single sided cooled
Thermal resistance - junction to sink	$R_{\Theta (j-s)}$		- -		K/kW	Double side cooling Single sided cooled
Mounting force	P	27	47	-	kN	±20%
Weight	W			1.70	Kg	about

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS





Sym	A	B	C	D	H
mm	109	73	98	3.5×3	26±1

Scomes srl reserves the right to change any specification without notice

issue:jun-2023

S.CO.M.E.S. srl Via Enrico Mattei,6/8 26823 Castiglione d'Adda(LO)-IT
Phone:+39 0377 901243 Fax:+39 0377 900206