

Ceramic stud diode
KS100A / 600V
Maximum Ratings And Characteristics

Symbol	Parameter		Values	Units	Test Conditions
ON-STATE					
I _{TAV}	Mean on-state current		-	A	Sinewave,180° conduction,Tc=100°C
I _{TRMS}	RMS value of on-state current		100	A	Nominal value
I _{TSM}	Peak one cycle surge (non repetitive) current		900	A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 125 °C
I ² t	I square t		4050	A ² s	8.3 msec and 10.0 msec
I _L	Latching current		100	mA	V _D = 12 V; R _L = 12 ohms
I _H	Holding current		30	mA	V _D = 12 V; I = 1 A
V _{TM}	Peak on-state voltage		2.0	V	I _{TM} = 150 A; Duty cycle ≤ 0.01%; T _i = 25 °C
di/dt	Critical rate of rise of on-state current	non-repetitive	300	A/μs	Gate drive 20V, 20Ω, t _r ≤1μs, T _j =T _j max, anode voltage≤80% V _{DRM}
		repetitive	50		
BLOCKING					
V _{DRM} V _{RRM}	Repetitive peak off state voltage Repetitive peak reverse voltage		600	V	
V _{DSM} V _{RSM}	Non repetitive peak off state voltage Non repetitive peak reverse voltage		700	V	
I _{DRM} I _{RRM}	Repetitive peak off state current Repetitive peak reverse current		10	mA	T _j = 125 °C ,V _{RRM} V _{DRM} applied
dV/dt	Critical rate of voltage rise		100	V/μs	T _j =T _j max, linear to 80% rated V _{DRM}
TRIGGERING					
P _{G(AV)}	Average gate power dissipation		-	W	
P _{GM}	Peak gate power dissipation		-	W	
I _{GM}	Peak gate current		-	A	
I _{GT}	Gate trigger current		200	mA	T _C = 25 °C
V _{GT}	Gate trigger voltage		3.0	V	T _C = 25 °C
V _{T(T0)}	Treshold voltage		1	V	
r _T	Slope resistance		2.4	mΩ	
V _{GD}	Gate non-trigger voltage		0.2	V	T _j = 125 °C
SWITCHING					
t _q	Turn-off time		-	μs	T _j = 125 °C
t _d	Delay time		-		Gate current 1A, di/dt=1A/μs, V _d =0.67%V _{DRM} , T _j =25 °C
Q _{rr}	Reverse recovery charge		-		

Thermal And Mechanical

Symbol	Parameter	Values	Units	Test Conditions
T_j	Operating temperature	-40~125	°C	
T_{stg}	Storage temperature	-40~150	°C	
$R_{th(j-c)}$	Thermal resistance - junction to case	0.4	°C/W	DC operation , Single sided cooled
$R_{th(c-s)}$	Thermal resistance - case to sink	0.08	°C/W	Single sided cooled
P	Mounting force	-	Nm	
W	Weight	-	g	about

OUTLINE

DIMENSIONS in millimeters (inches)

