LIXYS

Symbols & Terms

а	Acceleration	I _{DSS}	Drain source leakage current
BVara	Collector emitter breakdown voltage	I _F , I _T	Forward current
BV	Drain source breakdown voltage	I _{FM}	Maximum forward current
Dess	Drain Source Breakdown Volkage	I _{FAV}	Average forward current
$\mathbf{C}_{ies}, \mathbf{C}_{iss}$	Input capacitance	$I_{F(AV)M}, I_{T(AV)M}$	Maximum average forward current
C _{oes}	Output capacitance	I _{FLT}	Sink current of fault terminal
C_{res}, C_{rss}	Reverse transfer (Miller) capacitance	I _{FRM}	Maximum repetitive forward current
d	Duty cycle	I _{f(RMS)} , I _{t(RMS)}	RMS forward current
d _A	Strike distance through air	I _{FSM} , I _{TSM}	Maximum surge forward current
di/dt, -di/dt	Rate of change of current	I_{G}, I_{GT}	Trigger gate current
(di/dt) _{cr}	Critical rate of rise of current	I _{GD}	Non-trigger gate current
di _F /dt, -di _F /dt	Rate of change of forward current	I _{GES}	Gate emitter leakage current
d _s	Creeping distance on surface	I _H	Holding current
dv/dt	Rate of rise of voltage	I _{IN(H)}	Signal input current (high level)
(dv/dt) _{cr}	Critical rate of rise of voltage	I _{IN(L)}	Signal input current (low level)
F	Panatitiva avalanaha anarav	IISOL	RMS current for isolation test
	Nep repetitive evaluations energy	IL.	Latching current
		I _R	Reverse current
⊏ _{off}		I _{RM}	Maximum reverse recovery current
⊏on	rum-on energy per pulse	I _{RMS}	RMS current
Fc	Mounting force with clip	I _{RRM}	Maximum repetitive reverse current
Q _{fe}	Forward transconductance	I _S	Continuous source current
JIS		I _{SM}	Maximum pulsed source current
I _{AR}	Repetitive avalanche current	l²t, ∫i²dt	I ² t value for fusing
AVM	Maximum average forward current	I _{TSM}	Maximum surge on-state current
в _о	Breakover current	K,	Characteristic factor
C (on)	Short circuit current	K,	Coeff. for energy per pulse E, (material constant)
I _C		к _т	Temperature coefficient of V_{PO}
C25	Continuous DC collector current at $T_c = 25^{\circ}C$		
C90	Continuous DC collector current at $T_c = 90^{\circ}C$	L	Series stray inductance
I _{CES}	Collector emitter leakage current	M _d	Mounting torque
I _{СМ}	Maximum pulsed collector current		Collector dissipation
I _D		P	Power dissipation
DD	Module supply current, operating mode	• _D	Average gate power dissipation
DD0	Module supply current, standby mode	GAV P	Maximum average gate power dissipation
D(cont)		G(AV)M	Maximum date nower dissipation
D25	Continuous drain current at $T_c = 25^{\circ}C$	' GM P	Maximum surge reverse power dissipation
DAV	Average DC output current	RSM	Total nower dissipation
D(AV)M	waximum average DC output current	• T≀ • tot	
DM	Maximum pulsed drain current		
I _{DRM}	Maximum repetitive off-state current		
D(RMS)	RMS output current		



Symbols & Terms

Q_g	Total gate charge	V _{BO}	Breakover voltage
Q_{gc}	Gate collector (Miller) charge	V _{CE}	Collector emitter voltage
\mathbf{Q}_{gd}	Gate drain (Miller) charge	V _{CE(sat)}	Collector emitter saturation voltage
\mathbf{Q}_{ge}	Gate emitter charge	V _{CE(sat)FLT}	Collector emitter saturation voltage to indicate fault
Q_{gs}	Gate source charge	V _{CES}	Collector emitter voltage
Q _r	Recovered charge	V _{CGR}	Collector gate voltage
Q _{RM}	Recovered charge (intrinsic diode)	V _{DD}	Module supply voltage
Qs	Recovered charge to peak	$V_{\text{DD FLT}}$	Module supply voltage without fault
RBSOA	Reverse Bias Safe Operating Area	V_{DGR}	Drain gate voltage
R _{DS(an)}	Static drain source on resistance	V _{DRM}	Maximum repetitive forward blocking voltage
RFI	Radio frequency interference (= FMI)	V _{DS}	Drain source voltage
Ro	Gate resistance	V _{DSM}	Maximum non-repetitive forward blocking voltage
Ros	Gate emitter resistance	V _{DSS}	Drain source breakdown voltage
Γ _τ	Slope resistance (for power loss calculation only)	Version	Various construction designs of products
BHCK RHCH	Thermal resistance case to heatsink	V _F	Forward voltage
	Thermal resistance junction to ambient	V _{FLT}	Voltage at fault terminal
Rthuc	Thermal resistance junction to case	V_{FR}	Forward recovery voltage
R _{th.IK} . R _{th.IH}	Thermal resistance junction to heatsink	V_{GD}	Gate non-trigger voltage
R _{th.IS}	Thermal resistance junction to heatsink	V_{GE}	Gate emitter voltage
R _{th-IW}	Thermal resistance junction to water	V _{GE(th)}	Gate emitter threshold voltage
R _{thKA}	Thermal resistance heatsink to ambient	V_{GEM}	Maximum transient collector gate voltage
00001		V _{GES}	Maximum DC gate voltage
SCSUA	Short Circuit Safe Operating Area	V _{GS}	Gate source voltage
T_{amb},T_{A}	Ambient (cooling medium) temperature	V _{GS(th)}	Gate threshold voltage
T _C , T _{case}	Case temperature	V _{GSM}	Maximum transient gate source voltage
t _{d(off)}	Turn-off delay time	V _{GT}	Gate trigger voltage
t _{d(on)}	Turn-on delay time	V _H	Holding voltage
t _{fi}	Overcurrent or short circuit trip delay time	V _{IN}	Input control voltage
t _{fr}	Forward recovery time	V _{IN(H)}	Input voltage threshold for IGBT turn-on
t _{FLT}	Overcurrent or short circuit trip delay time	V _{IN(L)}	Input voltage threshold for IGBT turn-off
t _{gd}	Gate controlled delay time	VISOL	Isolation voltage
$\mathbf{T}_{\mathbf{J},\mathbf{T}_{\mathbf{V}\mathbf{J}}}$	Virtual junction temperature	V _R	Reverse voltage
$\mathbf{T}_{JM},\mathbf{T}_{VJM}$	Maximum virtual junction temperature	V _{RES}	Input voltage threshold for Reset = active
$T_{K,}T_{H,}T_{S}$	Heatsink temperature	V _{RGM}	Maximum reverse gate voltage
TL	Lead temperature	V _{RRM}	Maximum repetitive reverse voltage
T _{S(max)}	Maximum allowable heatsink temperature	V _{RSM}	Maximum non-repetitive reverse voltage
T _{stg}	Storage temperature	V _{SD}	Forward voltage drop
t _P	Pulse time	V _T	Forward voltage
t _q	Turn-off time	V _{T0}	Threshold voltage (for power loss calculation only)
t _r	Current rise time	Z _{thJC}	Transient thermal impedance junction to case
t _{rr}	Reverse recovery time	Z_{thJK}, Z_{thJH}	Transient thermal impedance junction to heatsink
t _{rv}	Rise time of collector emitter voltage	,	-