

SK08110 Preliminary Datasheet



SK08110

Typical Applications

- HVDC
- Railroad power supply
- Industrial drivers

Features

- Immortal Driver
- Multi-level switching
- Wide V_{CC}: 14-28V
- Intelligent Faults Management System

Absolute Maximum Ratings

Parameters	Symbol	Min	Typ	Max	Unit	Remarks
Supply voltage	V _{CC}	14	15	28	V	
Gate peak current	I _{GPEAK}			110	A	
Output power			10		W	T _A <85°C
Switching frequency	f			3	kHz	
Collector emitter voltage	V _{CE}		4.5		kV	Collector emitter voltage across the IGBT
Isolation test voltage	V _{isol IO}	10.5			kV	Primary to secondary side
Operating temperature	T _{op}	-40		+85	°C	
Storage temperature	T _{stg}	-40		+85	°C	

Electrical Characteristics

Power	Symbol	Min	Typ	Max	Unit	Remarks
Supply current I	I _{cc}		0.23		A	
Supply current I	I _{cc_max}		0.33		A	@f=3kHz

Supply voltage	V_{CC}	12	15	28	V	
Coupling capacitance	C_{io}		3	5	pF	Primary to secondary side
Gate turn on voltage	V_{Gon}		15		V	
Gate turn off voltage	V_{Goff}		-10		V	

Short Circuit Protection

Parameters

V_{CE} threshold	V_{REF_SC}		10.2		V	
Response time			9		us	

Timing Characteristics

Turn on delay	t_{don}		608		ns	
Turn off delay	t_{doff}		504		ns	
Rise time	t_r		19		ns	
Fall time	t_f		24		ns	
Faults feedback time			7.5		ms	
Faults blocking time			85		ms	

Electrical Isolation

Test voltage ($V_{ACrms,50Hz,60S}$)		10.5			kV	Primary to Secondary side
Creepage distance		63			mm	Primary to secondary side
Clearance distance		26			mm	Primary to secondary side

Gate Characteristics

Module	$R_{Gon} (\Omega)$	$R_{Goff1} (\Omega)$	$R_{Goff2} (\Omega)$	$C_{GE} (nF)$
5SNA3000K452300	2.4	3.2	6.5	330
ST1500GXH24	5.5	2.2	5	220

J8 Pin Destination

Pin	Label	Remarks
1	V_{CC}	15V supply voltage

2	GND	Ground
---	-----	--------

Mechanical Dimensions (unit : mm)

