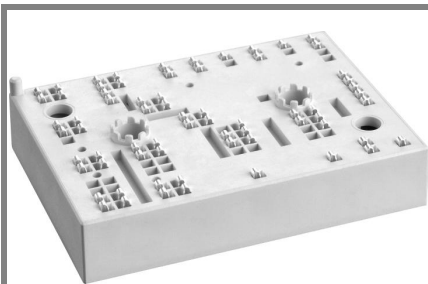


SKiiP 37AC12T4V1



MiniSKiiP®3

3-phase bridge inverter

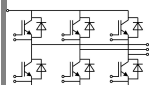
SKiiP 37AC12T4V1

Target Data

Features

- Trench 4 IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

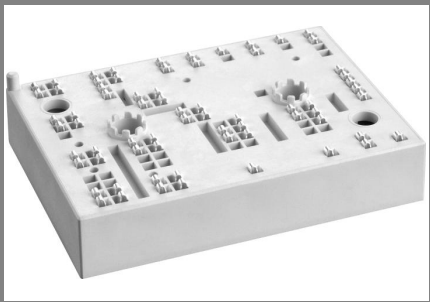


AC

Absolute Maximum Ratings			T _s = 25 °C, unless otherwise specified	
Symbol	Conditions		Values	Units
IGBT				
V _{CES}	T _j = 25 °C		1200	V
I _C	T _j = 175 °C	T _c = 25 °C	98	A
		T _c = 70 °C	78	A
I _{CRM}	I _{CRM} = 3xI _{Cnom}		225	A
V _{GES}			±20	V
t _{psc}	V _{CC} = 600 V; V _{GE} ≤ 20 V; T _j = 150 °C V _{CES} < 1200 V		10	µs
Inverse Diode				
I _F	T _j = 175 °C	T _c = 25 °C	82	A
		T _c = 70 °C	65	A
I _{FRM}	I _{CRM} = 3xI _{Cnom}		225	A
I _{FSM}	t _p = 10 ms; sin	T _j = 150 °C	425	A
Module				
I _{t(RMS)}			160	A
T _{vj}			-40...+150	°C
T _{stg}			-40...+125	°C
V _{isol}	AC, 1 min.		2500	V

Characteristics			T _s = 25 °C, unless otherwise specified			
Symbol	Conditions		min.	typ.	max.	Units
IGBT						
V _{GE(th)}	V _{GE} = V _{CE} , I _C = mA		5	5,8	6,5	V
I _{CES}	V _{GE} = V, V _{CE} = V _{CES} T _j = °C					mA
V _{CE0}	T _j = 25 °C			1,1	1,3	V
	T _j = 150 °C			1	1,2	V
r _{CE}	V _{GE} = 15 V T _j = 25°C			10	10	mΩ
	T _j = 150°C			17	17	mΩ
V _{CE(sat)}	I _{Cnom} = 75 A, V _{GE} = 15 V T _j = 25°C _{chiplev.}			1,85	2,05	V
	T _j = 150°C _{chiplev.}			2,25	2,45	V
C _{ies}	V _{CE} = , V _{GE} = V f = MHz					nF
C _{oes}						nF
C _{res}						nF
R _{Gint}	T _j = 25 °C		10			Ω
t _{d(on)}	R _{Gon} = 1 Ω	V _{CC} = V I _{Cnom} = 75A T _j = 150 °C V _{GE} = ±15V	11,5			ns
t _r						ns
E _{on}						mJ
t _{d(off)}	R _{Goff} = 1 Ω		7,3			ns
t _f						ns
E _{off}						mJ
R _{th(j-s)}	per IGBT		0,52			K/W

SKiiP 37AC12T4V1



MiniSKiiP[®]3

3-phase bridge inverter

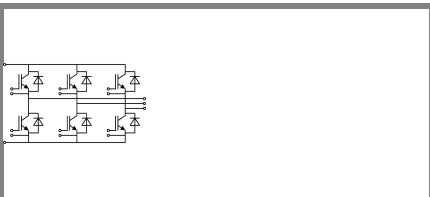
SKiiP 37AC12T4V1

Target Data

Features

- Trench 4 IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications



AC

Characteristics						
Symbol	Conditions		min.	typ.	max.	Units
Inverse Diode						
V _F = V _{EC}	I _{Fnom} = 75 A; V _{GE} = 15 V	T _j = 25 °C _{chiplev.}		2,2	2,5	V
		T _j = 150 °C _{chiplev.}		2,1	2,45	V
V _{F0}		T _j = 25 °C		1,3	1,5	V
		T _j = 150 °C		0,9	1,1	V
r _F		T _j = 25 °C		12	13	mΩ
		T _j = 150 °C		16	18	mΩ
I _{RRM}	I _{Fnom} = 75 A	T _j = 125 °C		74		A
Q _{rr}				13,4		μC
E _{rr}				5,7		mJ
	V _{GE} = ±15V					
R _{th(j-s)}	per diode			0,76		K/W
M _s	to heat sink		2		2,5	Nm
w				95		g
Temperature sensor						
R _{ts}	3%, Tr = 25°C			1000		Ω
R _{ts}	3%, Tr = 100°C			1670		Ω

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

