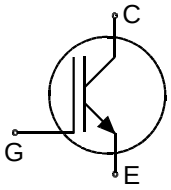
SIGC16T120C

IGBT Chip in NPT-technology

Features:
- 1200V NPT technology
- short circuit prove
- positive temperature coefficient
- easy paralleling

This chip is used for:
- power module
  BUP 311D /BUP 212

Applications:
- drives



Chip Type	V_{CE}	I_C	Die Size	Package
SIGC16T120C	1200V	8A	4.04 x 4 mm^2	sawn on foil

Mechanical Parameter

Raster size	4.04 x 4	mm^2
Emitter pad size	2.18 x 1.88	
Gate pad size	1.08 x 0.71	
Area total	16.16	
Thickness	200	µm
Wafer size	150	mm
Max.possible chips per wafer	898	
Passivation frontside	Photoimide	
Pad metal	3200 nm AlSiCu	
Backside metal	Ni Ag –system suitable for epoxy and soft solder die bonding	
Die bond	Electrically conductive glue or solder	
Wire bond	Al, <500µm	
Reject ink dot size	∅ 0.65mm ; max 1.2mm	
Recommended storage environment	Store in original container, in dry nitrogen, in dark environment, < 6 month at an ambient temperature of 23°C	

Edited by INFINEON Technologies, AIM PMD D CID CLS, L7131MM, Edition 2.1, 14.10.2008

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Emitter voltage, T_{vj} =25 °C	V_{CE}	1200	V
DC collector current, limited by $T_{vj\,max}$	I_C	1)	A
Pulsed collector current, t_p limited by $T_{vj\,max}$	$I_{c,puls}$	24	A
Gate emitter voltage	V_{GE}	±20	V
Junction temperature range	T_{vj}	-55 ... +175	°C
Operating junction temperature	T_{vj}	-55...+150	°C
Short circuit data 2) V_{GE} = 15V, V_{CC} = 900V, T_{vj} = 150°C	t_{SC}	10	µs
Reverse bias safe operating area 2) (RBSOA)	$I_{C,max}$ = 16A, $V_{CE,max}$ = 1200V $T_{vj} \leq 150°C$		

1) depending on thermal properties of assembly

2) not subject to production test - verified by design/characterization

Static Characteristic (tested on wafer), T_{vj} =25 °C

Parameter	Symbol	Conditions	Value			Unit
			min.	typ.	max.	
Collector-Emitter breakdown voltage	$V_{(BR)CES}$	V_{GE}=0V , I_C= 0.5mA	1200			V
Collector-Emitter saturation voltage	V_{CEsat}	V_{GE}=15V, I_C=8A	2.0	2.5	3.0	
Gate-Emitter threshold voltage	$V_{GE(th)}$	I_C=0.35mA , V_{GE}=V_{CE}	4.5	5.5	6.5	
Zero gate voltage collector current	I_{CES}	V_{CE}=1200V , V_{GE}=0V			1	µA
Gate-Emitter leakage current	I_{GES}	V_{CE}=0V , V_{GE}=20V			120	nA
Integrated gate resistor	r_G			none		Ω

Dynamic Characteristic (not subject to production test - verified by design / characterization), T_{vj} =25 °C

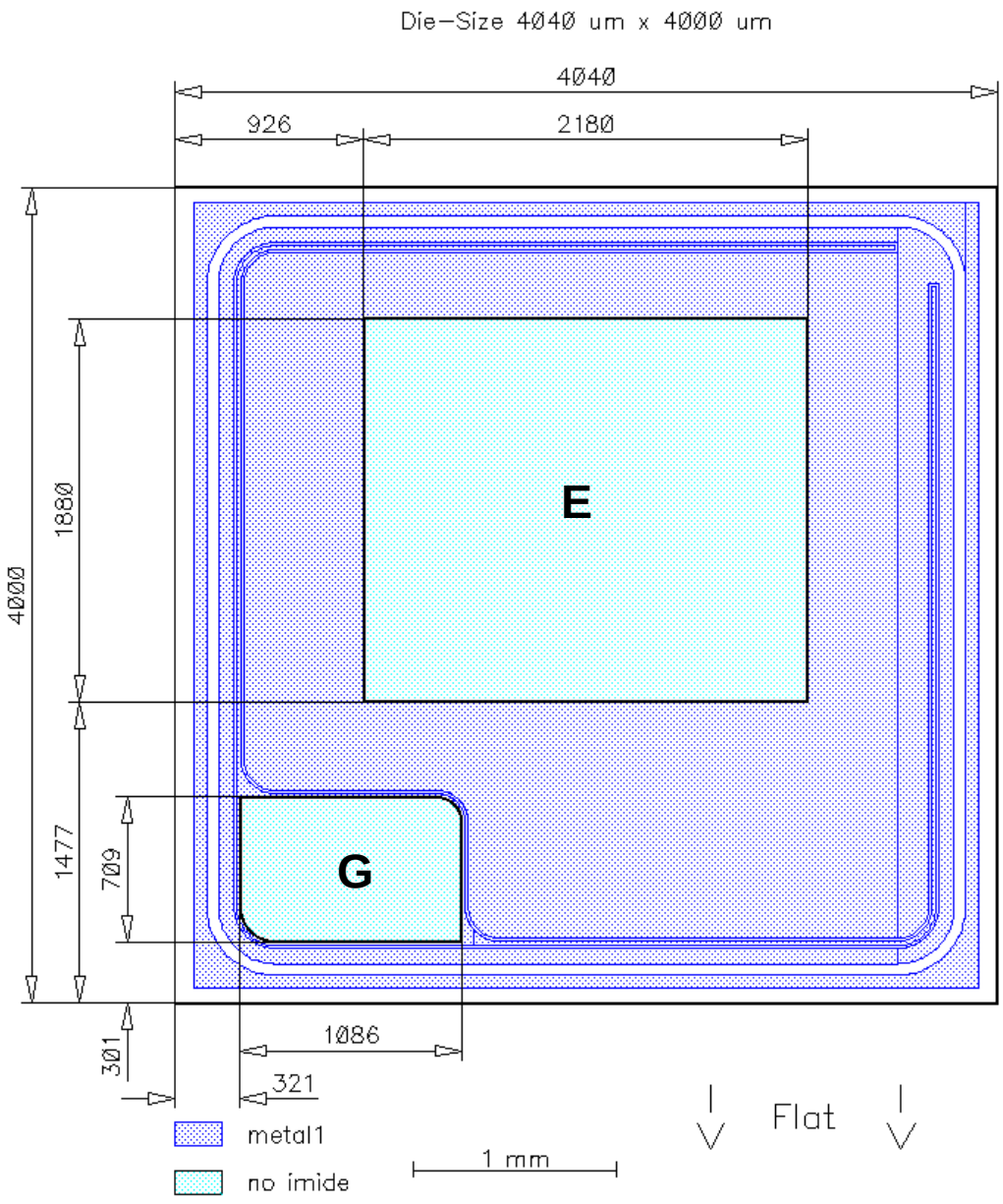
Parameter	Symbol	Conditions	Value			Unit
			min.	typ.	max.	
Input capacitance	C_{ies}	V_{CE}=25V,		600		pF
Output capacitance	C_{oes}	V_{GE}=0V,		60		
Reverse transfer capacitance	C_{res}	f=1MHz		38		

Edited by INFINEON Technologies, AIM PMD D CID CLS, L7131MM, Edition 2.1, 14.10.2008

Further Electrical Characteristic

Switching characteristics and thermal properties are depending strongly on module design and mounting technology and can therefore not be specified for a bare die.

Chip Drawing



E = Emitter pad
G = Gate pad

SIGC16T120C

Description

AQL 0,65 for visual inspection according to failure catalogue

Electrostatic Discharge Sensitive Device according to MIL-STD 883

Published by
Infineon Technologies AG
81726 Munich, Germany

Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Edited by INFINEON Technologies, AIM PMD D CID CLS, L7131MM, Edition 2.1, 14.10.2008

单击下面可查看定价，库存，交付和生命周期等信息

>>Infineon Technologies(英飞凌)