



Table of Contents

Description 2

Table of Contents 3

Maximum Ratings 4

Thermal Resistance 4

Electrical Characteristics 5

Electrical Characteristics Diagrams 7

Package Drawing13

Testing Conditions14

Revision History15

Disclaimer15

Maximum Ratings

For optimum lifetime and reliability, Infineon recommends operating conditions that do not exceed 80% of the maximum ratings stated in this datasheet.

Parameter	Symbol	Value	Unit
Collector-emitter voltage, $T_{vj} \geq 25^{\circ}\text{C}$	V_{CE}	650	V
DC collector current, limited by T_{vjmax} $T_C = 25^{\circ}\text{C}$ $T_C = 117^{\circ}\text{C}$	I_C	60.0 30.0	A
Pulsed collector current, t_p limited by T_{vjmax}	I_{Cpuls}	90.0	A
Turn off safe operating area $V_{CE} \leq 650\text{V}$, $T_{vj} \leq 175^{\circ}\text{C}$, $t_p = 1\mu\text{s}$	-	90.0	A
Diode forward current, limited by T_{vjmax} $T_C = 25^{\circ}\text{C}$ $T_C = 100^{\circ}\text{C}$	I_F	24.0 15.0	A
Diode pulsed current, t_p limited by T_{vjmax}	I_{Fpuls}	45.0	A
Gate-emitter voltage	V_{GE}	± 20	V
Power dissipation $T_C = 25^{\circ}\text{C}$ Power dissipation $T_C = 117^{\circ}\text{C}$	P_{tot}	185.0 75.0	W
Operating junction temperature	T_{vj}	-40...+175	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55...+150	$^{\circ}\text{C}$
Soldering temperature, wave soldering 1.6mm (0.063in.) from case for 10s		260	$^{\circ}\text{C}$
Mounting torque, M3 screw Maximum of mounting processes: 3	M	0.6	Nm

Thermal Resistance

Parameter	Symbol	Conditions	Max. Value	Unit
Characteristic				
IGBT thermal resistance, junction - case	$R_{th(j-c)}$		0.81	K/W
Diode thermal resistance, junction - case	$R_{th(j-c)}$		3.40	K/W
Thermal resistance junction - ambient	$R_{th(j-a)}$		40	K/W