



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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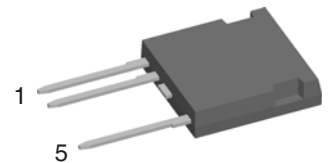
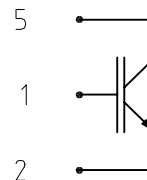
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High Voltage BIMOSFET™

in High Voltage ISOPLUS i4-PAC™

Monolithic Bipolar MOS Transistor



$$\begin{aligned} I_{C25} &= 28 \text{ A} \\ V_{CES} &= 1600 \text{ V} \\ V_{CE(sat)} &= 6.2 \text{ V} \\ t_f &= 40 \text{ ns} \end{aligned}$$

IGBT

Symbol	Conditions	Maximum Ratings	
V_{CES}	$T_{VJ} = 25^{\circ}\text{C to } 150^{\circ}\text{C}$	1600	V
V_{GES}		± 20	V
I_{C25}	$T_C = 25^{\circ}\text{C}$	28	A
I_{C90}	$T_C = 90^{\circ}\text{C}$	16	A
I_{CM} V_{CEK}	$V_{GE} = 15/0 \text{ V}; R_G = 22 \Omega; T_{VJ} = 125^{\circ}\text{C}$ RBSOA, Clamped inductive load; $L = 100 \mu\text{H}$	40	A
		$0.8V_{CES}$	
P_{tot}	$T_C = 25^{\circ}\text{C}$	250	W

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^{\circ}\text{C}$, unless otherwise specified)		
		min.	typ.	max.
$V_{CE(sat)}$	$I_C = 20 \text{ A}; V_{GE} = 15 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		6.2 6.9	7.1 V
$V_{GE(th)}$	$I_C = 2 \text{ mA}; V_{GE} = V_{CE}$	4		8 V
I_{CES}	$V_{CE} = 0.8V_{CES}; V_{GE} = 0 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.8	0.4 mA mA
I_{GES}	$V_{CE} = 0 \text{ V}; V_{GE} = \pm 20 \text{ V}$			500 nA
$t_{d(on)}$ t_r $t_{d(off)}$ t_f	Inductive load, $T_{VJ} = 125^{\circ}\text{C}$ $V_{CE} = 960 \text{ V}; I_C = 25 \text{ A}$ $V_{GE} = 15/0 \text{ V}; R_G = 22 \Omega$		200 60 300 40	ns ns ns ns
C_{ies}			3300	pF
Q_{Gon}			130	nC
V_F	(reverse conduction); $I_F = 20 \text{ A}$		2.5	V
R_{thJC}				0.5 K/W

Features

- High Voltage BIMOSFET™
 - substitute for high voltage MOSFETs with significantly lower voltage drop
 - fast switching for high frequency operation
 - reverse conduction capability
- ISOPLUS i4-PAC™ high voltage package
 - isolated back surface
 - enlarged creepage towards heatsink
 - enlarged creepage between high voltage pins
 - application friendly pinout
 - high reliability
 - industry standard outline

Applications

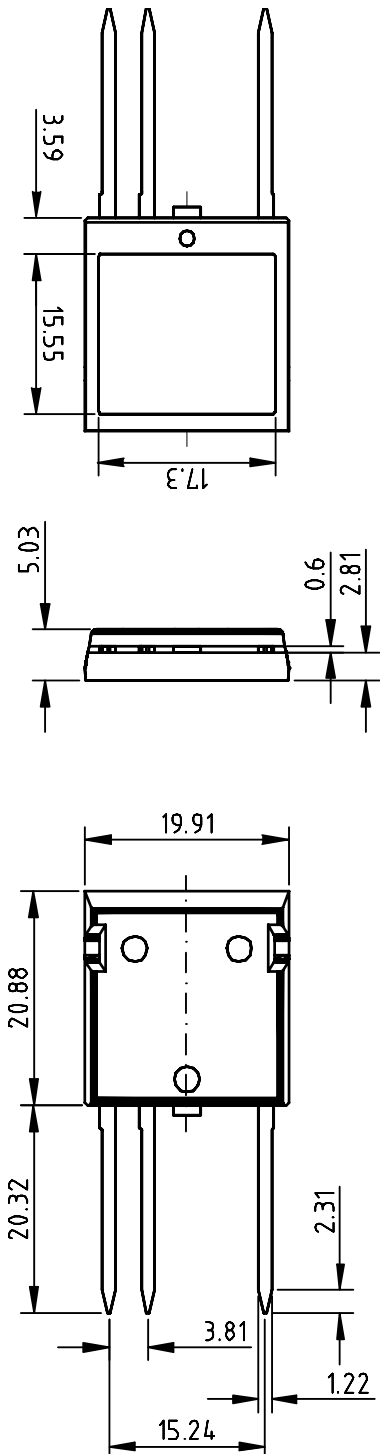
- switched mode power supplies
- DC-DC converters
- resonant converters
- lamp ballasts
- laser generators, x ray generators

Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-55...+150	°C
T_{stg}		-55...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	2500	V~
F_c	mounting force with clip	20...120	N

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
d_s, d_A	C pin - E pin	7		mm
d_s, d_A	pin - backside metal	5.5		mm
R_{thCH}	with heatsink compound		0.15	K/W
Weight			9	g

Dimensions in mm (1 mm = 0.0394")



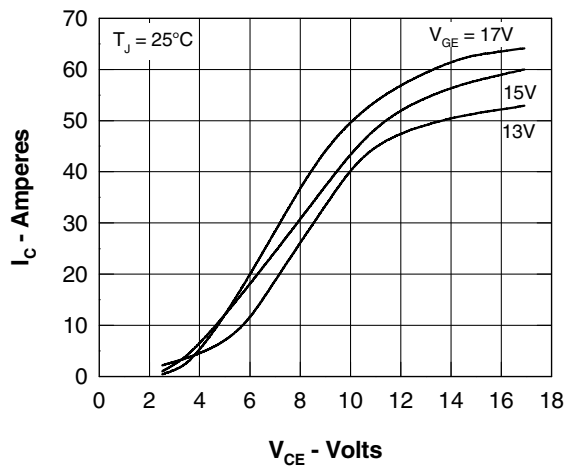


Fig. 1 Typ. Output Characteristics

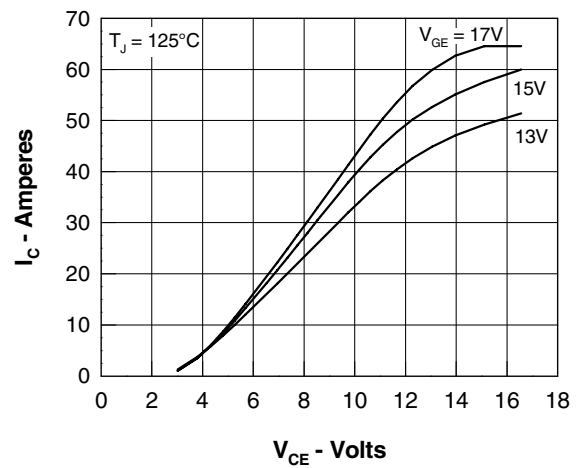


Fig. 2 Typ. Output Characteristics

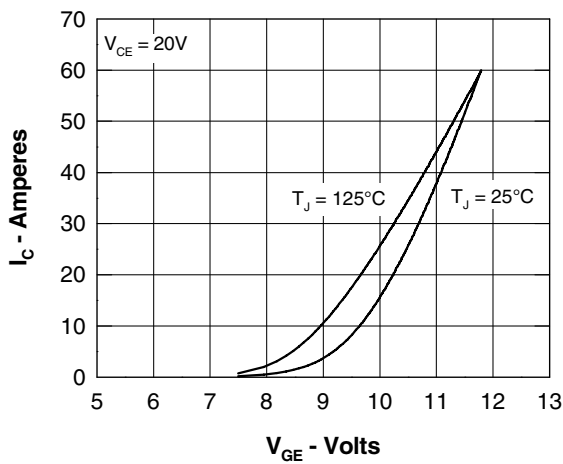


Fig. 3 Typ. Transfer Characteristics

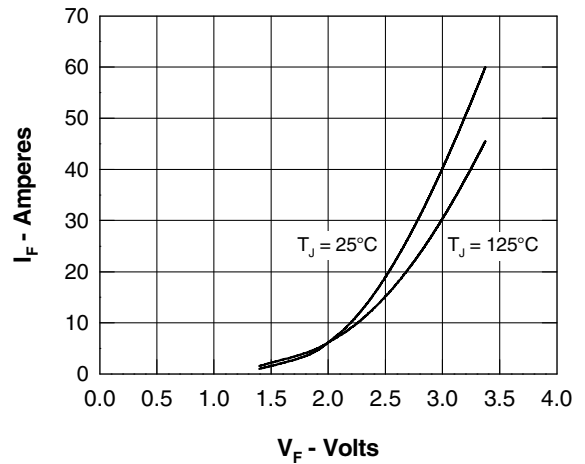


Fig. 4 Typ. Characteristics of Reverse Conduction

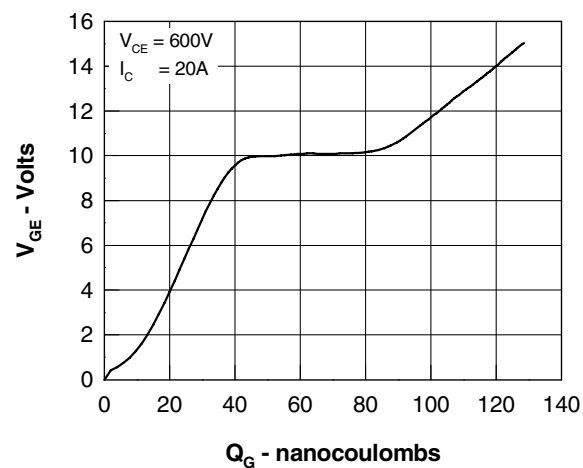


Fig. 5 Typ. Gate Charge characteristics

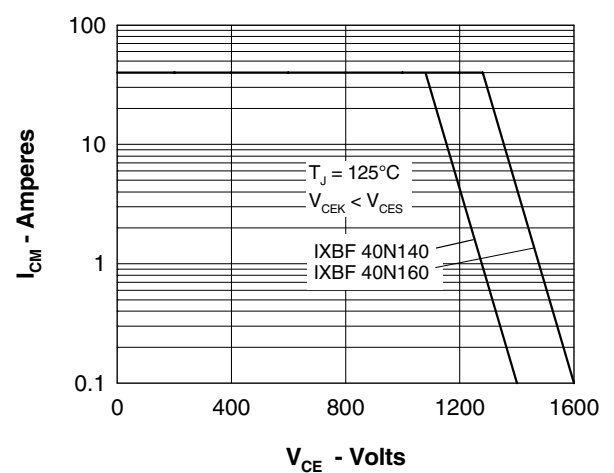


Fig. 6 Reverse Based Safe Operating Area RBSOA

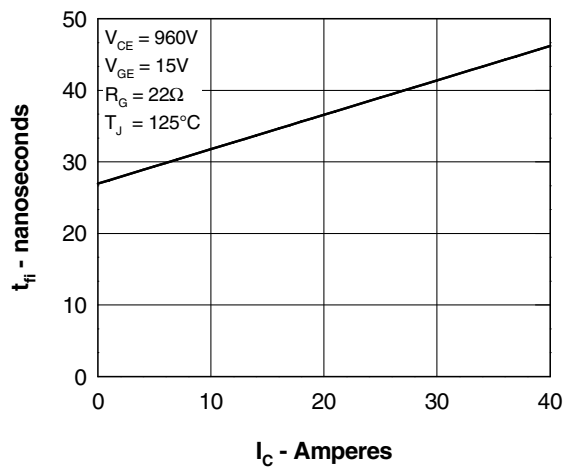


Fig. 7 Typ. Fall Time

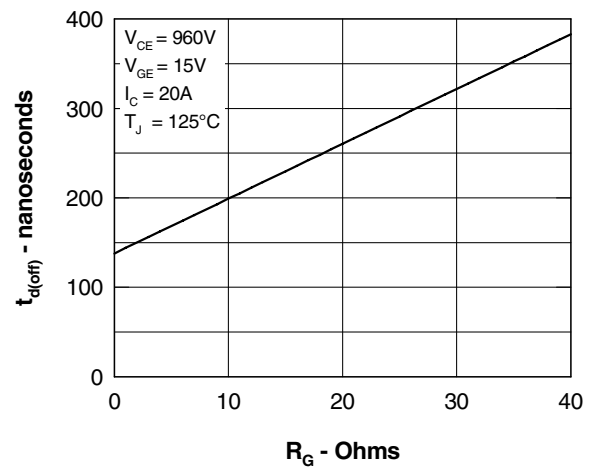


Fig. 8 Typ. Turn Off Delay Time

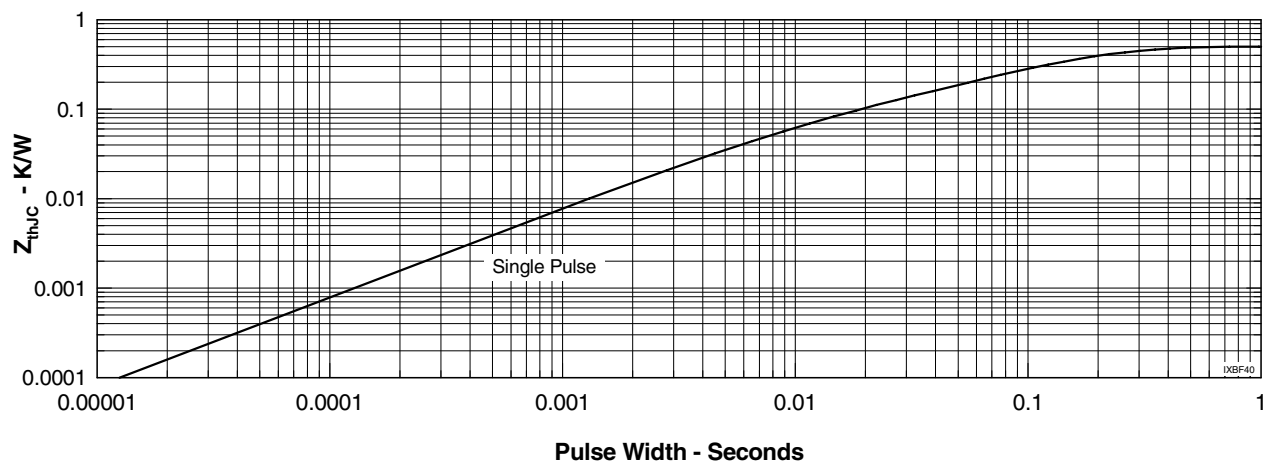


Fig. 9 Typ. Transient Thermal Impedance