



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



High Voltage IGBT

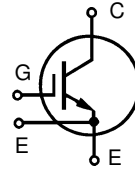
IXDN 75N120

$$V_{CES} = 1200 \text{ V}$$

$$I_{C25} = 150 \text{ A}$$

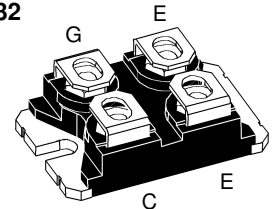
$$V_{CE(sat) \text{ typ}} = 2.2 \text{ V}$$

Short Circuit SOA Capability
Square RBSOA



miniBLOC, SOT-227 B

E153432



E = Emitter ①, C = Collector
G = Gate, E = Emitter ①

① Either Emitter terminal can be used as Main or Kelvin Emitter

Symbol	Conditions	Maximum Ratings	
V_{CES}	$T_J = 25^\circ\text{C to } 150^\circ\text{C}$	1200	V
V_{CGR}	$T_J = 25^\circ\text{C to } 150^\circ\text{C}; R_{GE} = 20 \text{ k}\Omega$	1200	V
V_{GES}	Continuous	± 20	V
V_{GEM}	Transient	± 30	V
I_{C25}	$T_C = 25^\circ\text{C}$	150	A
I_{C90}	$T_C = 90^\circ\text{C}$	95	A
I_{CM}	$T_C = 90^\circ\text{C}, t_p = 1 \text{ ms}$	190	A
RBSOA	$V_{GE} = \pm 15 \text{ V}, T_J = 125^\circ\text{C}, R_G = 15 \Omega$ Clamped inductive load, $L = 30 \mu\text{H}$	$I_{CM} = 150$ $V_{CEK} < V_{CES}$	A
t_{SC} (SCSOA)	$V_{GE} = \pm 15 \text{ V}, V_{CE} = V_{CES}, T_J = 125^\circ\text{C}$ $R_G = 15 \Omega$, non repetitive	10	μs
P_C	$T_C = 25^\circ\text{C}$ IGBT	660	W
V_{ISOL}	50/60 Hz; $I_{ISOL} \leq 1 \text{ mA}$	2500	V~
T_J		-40 ... +150	$^\circ\text{C}$
T_{stg}		-40 ... +150	$^\circ\text{C}$
M_d	Mounting torque	1.5/13	Nm/lb.in.
	Terminal connection torque (M4)	1.5/13	Nm/lb.in.
Weight		30	g

Features

- NPT IGBT technology
- low saturation voltage
- low switching losses
- square RBSOA, no latch up
- high short circuit capability
- positive temperature coefficient for easy paralleling
- MOS input, voltage controlled
- International standard package miniBLOC

Advantages

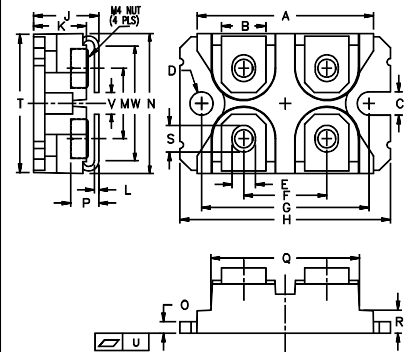
- Space savings
- Easy to mount with 2 screws
- High power density

Typical Applications

- AC motor speed control
- DC servo and robot drives
- DC choppers
- Uninterruptible power supplies (UPS)
- Switch-mode and resonant-mode power supplies

Symbol	Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
$V_{(BR)CES}$	$V_{GE} = 0 \text{ V}$	1200		V
$V_{GE(th)}$	$I_C = 3 \text{ mA}, V_{CE} = V_{GE}$	4.5		6.5 V
I_{CES}	$V_{CE} = V_{CES}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$		6	4 mA mA
I_{GES}	$V_{CE} = 0 \text{ V}, V_{GE} = \pm 20 \text{ V}$			$\pm 500 \text{ nA}$
$V_{CE(sat)}$	$I_C = 75 \text{ A}, V_{GE} = 15 \text{ V}$	2.2	2.7	V

Symbol	Conditions	Characteristic Values		
		(T _J = 25°C, unless otherwise specified)		
		min.	typ.	max.
C _{ies}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		5500	pF
C _{oes}			750	pF
C _{res}			330	pF
Q _g	I _C = 75 A, V _{GE} = 15 V, V _{CE} = 0.5 V _{CES}		360	nC
t _{d(on)}	Inductive load, T _J = 125°C I _C = 75 A, V _{GE} = ±15 V, V _{CE} = 600 V, R _G = 15 Ω		100	ns
t _r			50	ns
t _{d(off)}			650	ns
t _f			50	ns
E _{on}			12.1	mJ
E _{off}		10.5	mJ	
R _{thJC}	Package with heatsink compound		0.1	0.19 K/W
R _{thCK}				K/W

miniBLOC, SOT-227 B


M4 screws (4x) supplied

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	31.50	31.88	1.240	1.255
B	7.80	8.20	0.307	0.323
C	4.09	4.29	0.161	0.169
D	4.09	4.29	0.161	0.169
E	4.09	4.29	0.161	0.169
F	14.91	15.11	0.587	0.595
G	30.12	30.30	1.186	1.193
H	37.80	38.20	1.489	1.505
J	11.68	12.22	0.460	0.481
K	8.92	9.60	0.351	0.378
L	0.76	0.84	0.030	0.033
M	12.60	12.85	0.496	0.506
N	25.15	25.42	0.990	1.001
O	1.98	2.13	0.078	0.084
P	4.95	5.97	0.195	0.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	0.155	0.174
S	4.72	4.85	0.186	0.191
T	24.59	25.07	0.968	0.987
U	-0.05	0.1	-0.002	0.004
V	3.30	4.57	0.130	0.180
W	0.780	0.830	0.031	0.033

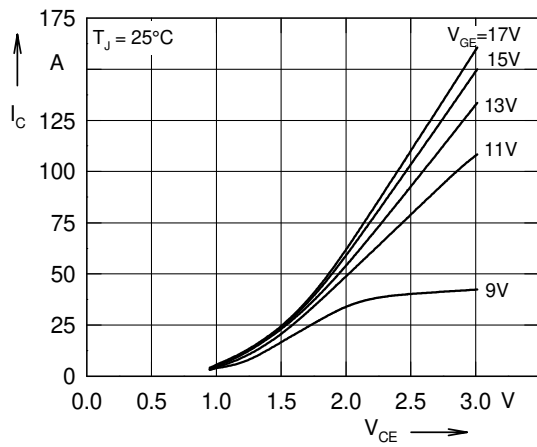


Fig. 1 Typ. output characteristics

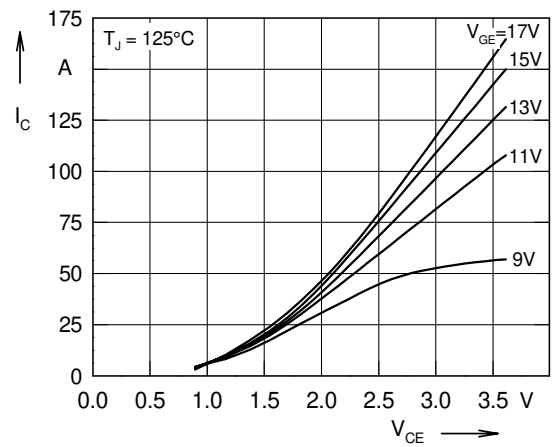


Fig. 2 Typ. output characteristics

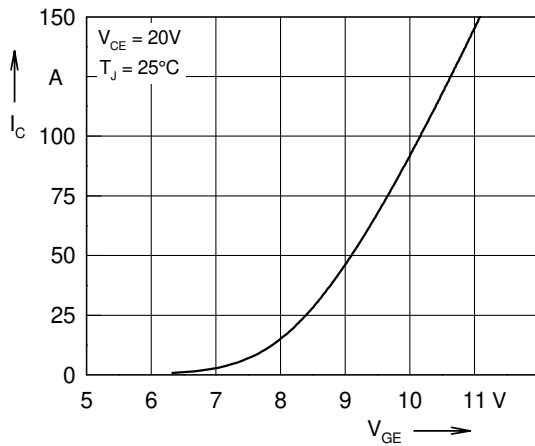


Fig. 3 Typ. transfer characteristics

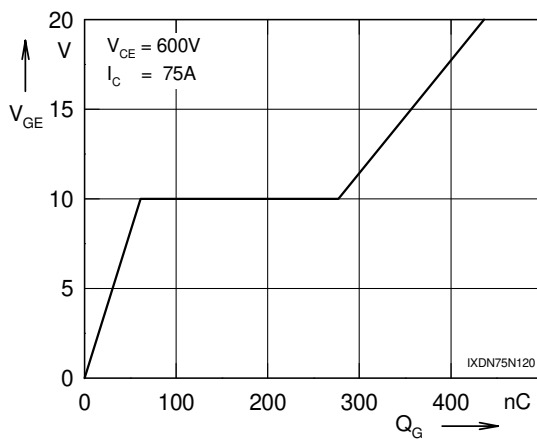


Fig. 4 Typ. turn on gate charge

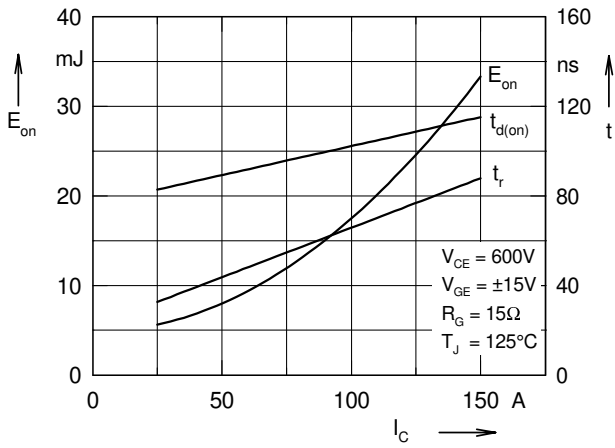


Fig. 5 Typ. turn on energy and switching times versus collector current

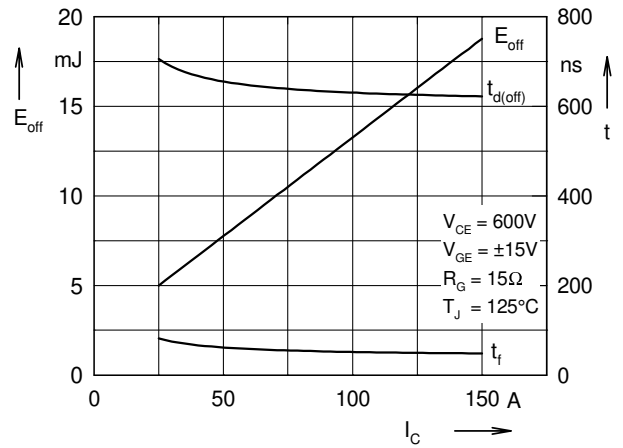


Fig. 6 Typ. turn off energy and switching times versus collector current

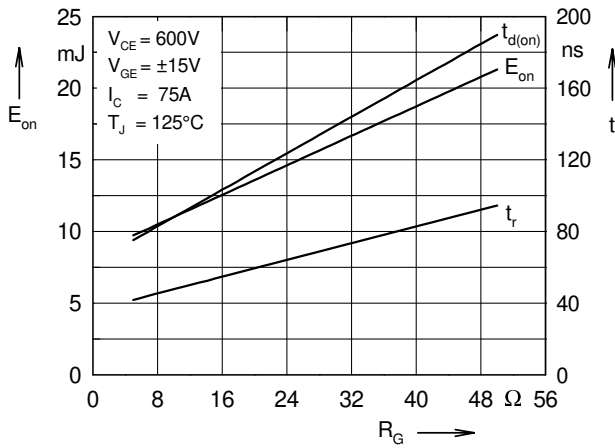


Fig. 7 Typ. turn on energy and switching times versus gate resistor

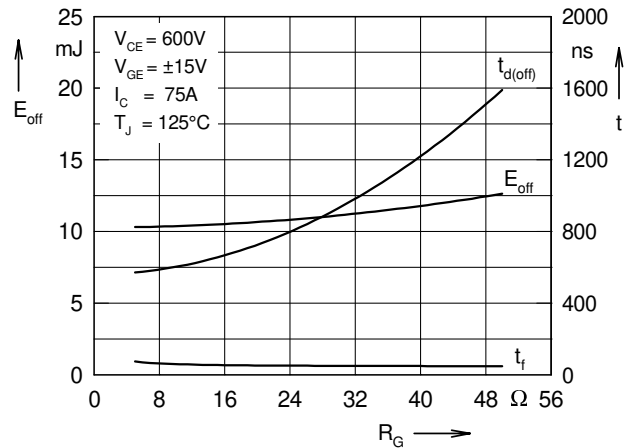


Fig.8 Typ. turn off energy and switching times versus gate resistor

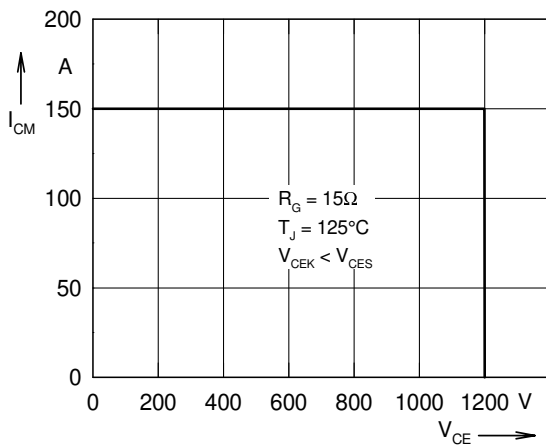


Fig. 9 Reverse biased safe operating area RBSOA

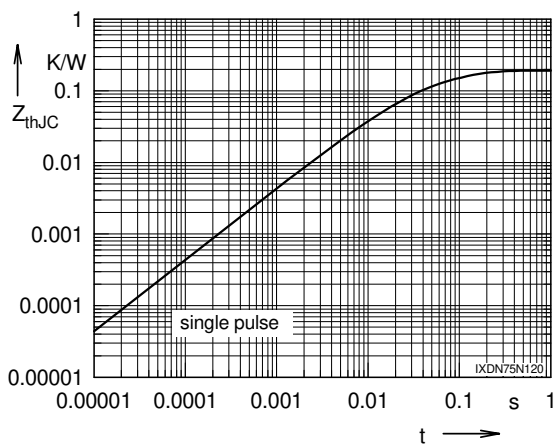


Fig. 10 Typ. transient thermal impedance