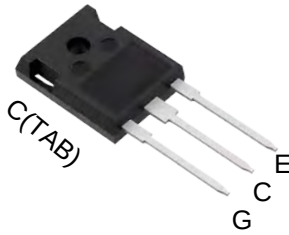


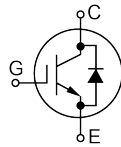
SG75T65UDB2

IGBT Discretes

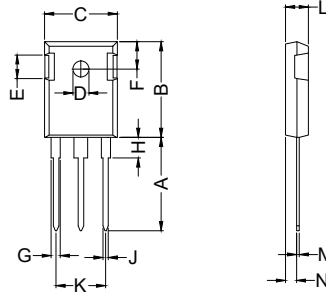
Dimensions TO-247AD



$V_{CES} = 650V$
 $I_{C100} = 75A$
 $V_{CESAT} = 1.70V$
 $E_{off} = 2.5mJ$



G=Gate
 C=Collector
 E=Emitter
 TAB=Collector



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.18	0.065	0.086
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

Symbol	Test Conditions	Maximum Ratings	Unit
V_{CES}	$T_{VJ}=25^{\circ}C$	650	V
V_{GE}		± 20	V
I_C	$T_C=25^{\circ}C$	150	A
	$T_C=100^{\circ}C$	75	A
I_{CM}	$T_C=25^{\circ}C, 1ms$	225	A
I_F	$T_C=100^{\circ}C$	75	A
t_{SC}		10	μs
P_{tot}	$T_C=25^{\circ}C$	360	W
T_{VJ}		175	$^{\circ}C$
T_{stg}		-55...+150	$^{\circ}C$
	Maximum lead temperature for soldering 1.6mm from case for 10s	300	$^{\circ}C$
	Maximum Tab temperature for soldering SMD devices for 10s	260	
M	Mounting torque (M3)	1.13/10	Nm/lb.in.
Weight	Typical	6	g

Sirectifier®

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IGBT Discretes

Characteristics

T_C=25°C, unless otherwise specified

Symbol	Conditions	min.	typ.	max.	Unit
IGBT					
V _{GE(th)}	V _{GE} =V _{CE} , I _C =1mA	3.5	4.5	5.5	V
I _{CES}	V _{GE} =0V; V _{CE} =V _{CES} ; T _J =25°C	-	-	2.0	mA
V _{CE(TO)}	T _J =25°C	-	0.8	0.9	V
r _{CE}	V _{GE} =15V, T _J =25°C	-	12	15	mΩ
V _{CE(sat)}	I _C =75A; V _{GE} =15V; chip level	-	1.70	2.00	V
C _{ies}	under following conditions V _{GE} =0V, V _{CE} =25V, f=1MHz	-	3500	-	pF
C _{oes}		-	300	-	
C _{res}		-	40	-	
t _{d(on)}	under following conditions: V _{CC} =400V, I _C =75A R _{GON} =R _{GOFF} =20Ω, T _J =25°C V _{GE} =±15V	-	60	-	ns
t _r		-	85	-	ns
t _{d(off)}		-	85	-	ns
t _f		-	40	-	ns
E _{on} (E _{off})	T _C =25°C	-	2.5/2.5	-	mJ
Inverse Diode					
V _F =V _{EC}	I _F =75A; V _{GE} =0V; T _J =25°C	-	1.5	2.2	V
V _(FO)	T _J =25(150)°C	-	0.8	0.9	V
r _F	T _J =25(150)°C	-	9	17	mΩ
I _{RRM}	I _F =75A; T _J =25°C di/dt=2100A/us V _{GE} =±15V	-	25	-	A
Q _{rr}		-	2.0	-	μC
E _{rr}		-	1.0	-	mJ
Thermal Characterisitics					
R _{thJC}	per IGBT	-	-	0.45	K/W
R _{thJC}	per Inverse Diode	-	-	0.80	K/W

Features

- Trench Field Stop IGBT technology
- Low switching losses
- Switching frequency up to 20KHz
- High short circuit capability
- Positive temperature coefficient for easy parallelling
- MOS input, voltage controlled
- Ultrafast free wheeling diodes

Application

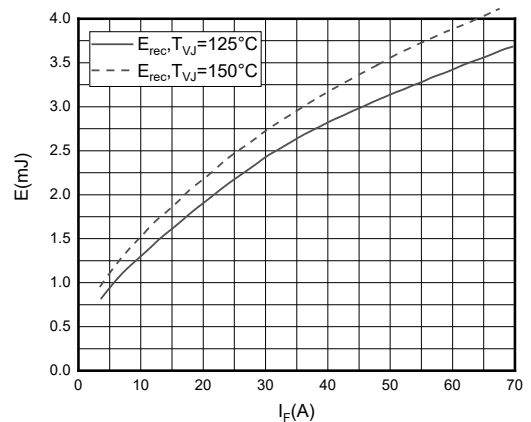
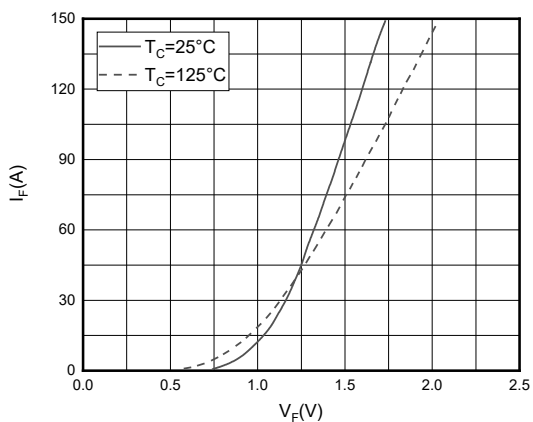
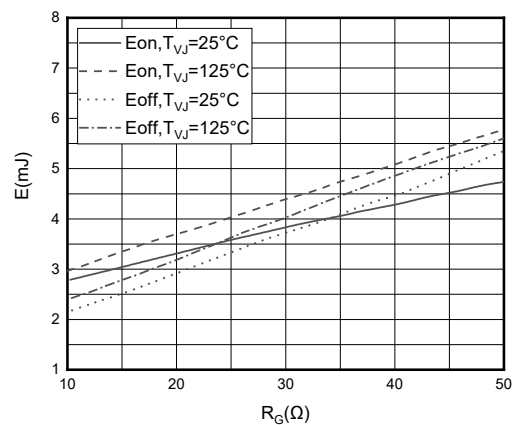
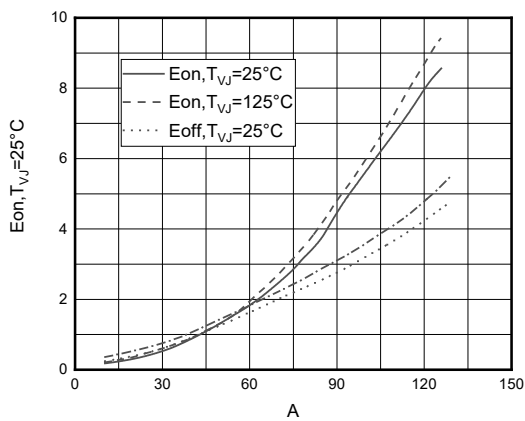
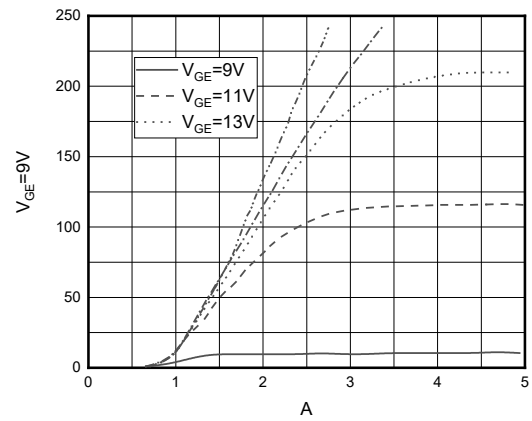
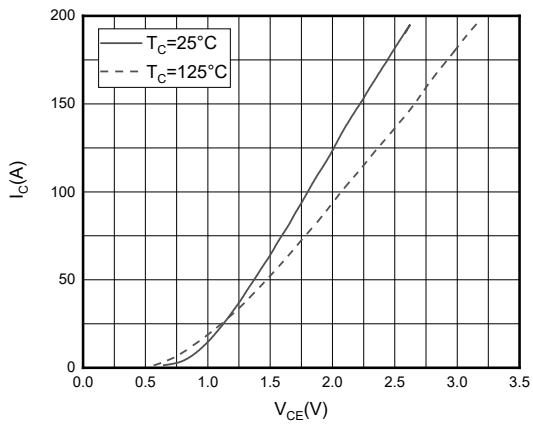
- AC and DC motor control
- AC servo and robot drives
- power supplies
- Welding machines

Advantages

- space and weight savings
- reduced protection circuits

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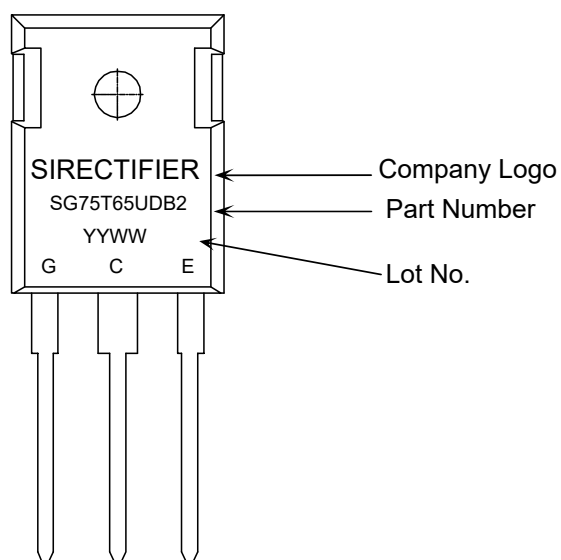
IGBT Discretes



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MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
SG75T65UDB2	TO-247AD	30pcs / Tube	SG75T65UDB2