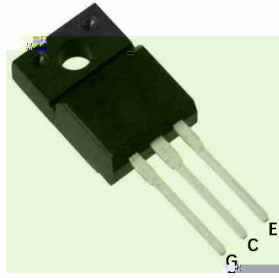




# DGF10N65CTL0

## IGBT Discrete



### Features

High speed smooth switching device for hard & soft switching

Maximum junction temperature 175

Positive temperature coefficient

### Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Emitter Breakdown Voltage	$V_{CE}$	650	V
DC Collector Current, limited by $T_{jmax}$ $T_C=25^{\circ}C$ $T_C=100^{\circ}C$	$I_C$	15 8	A
Diode Forward Current, limited by $T_{jmax}$ $T_C=25^{\circ}C$ $T_C=100^{\circ}C$	$I_F$	15 8	A
Continuous Gate-Emitter Voltage	$V_{GE}$	$\pm 20$	V
Transient Gate-Emitter Voltage ( $t_p=10\mu s, D<0.010$ )	$V_{GE}$	$\pm 30$	V
Turn off Safe Operating Area $V_{CE}=600V,$ $T_j$		40	A
Pulsed Collector Current, $V_{GE}=15V,$ $t_p$ limited by $T_{jmax}$	$I_{CM}$	40	A
Short Circuit Withstand Time, $V_{GE}=15V,$	$T_{sc}$	5	
Diode Pulsed Current, $t_p$ limited by $T_{jmax}$	$I_{Fpuls}$	40	A
Power Dissipation, $T_j=175^{\circ}C, T_c=25^{\circ}C$	$P_{tot}$	31	W



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## Electrical Characteristics of the IGBT $T_j = 25$ unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Static</b>						
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$V_{GE}=0V, I_C$	650		-	V
Gate Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=1mA$	4.4	5.2	6.0	V

Collector-Emitter  
Saturation Voltage

$V_{CE(sat)}$



# DGF10N65CTL0

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**Electrical Characteristics of the Diode**  $T_j = 25$  unless otherwise specified



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## Electrical Characteristics of the DIODE

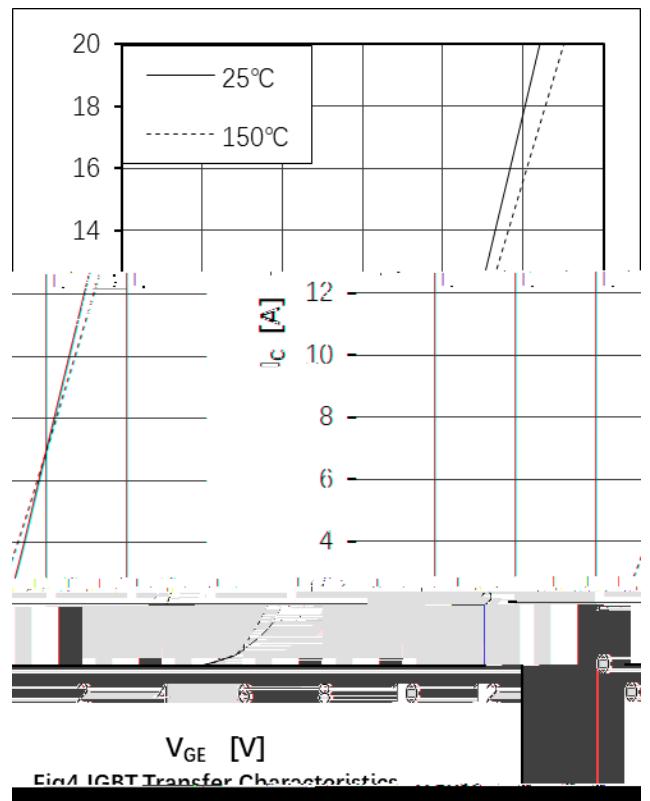
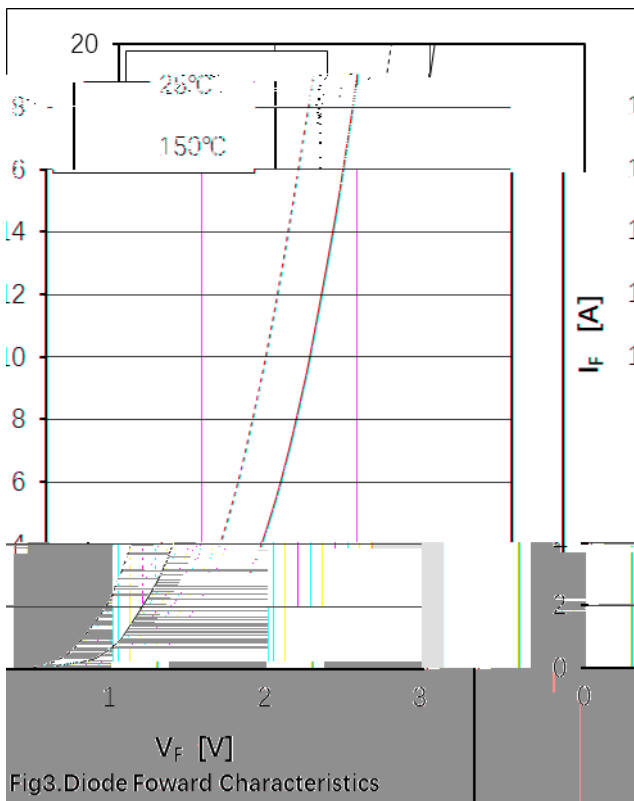
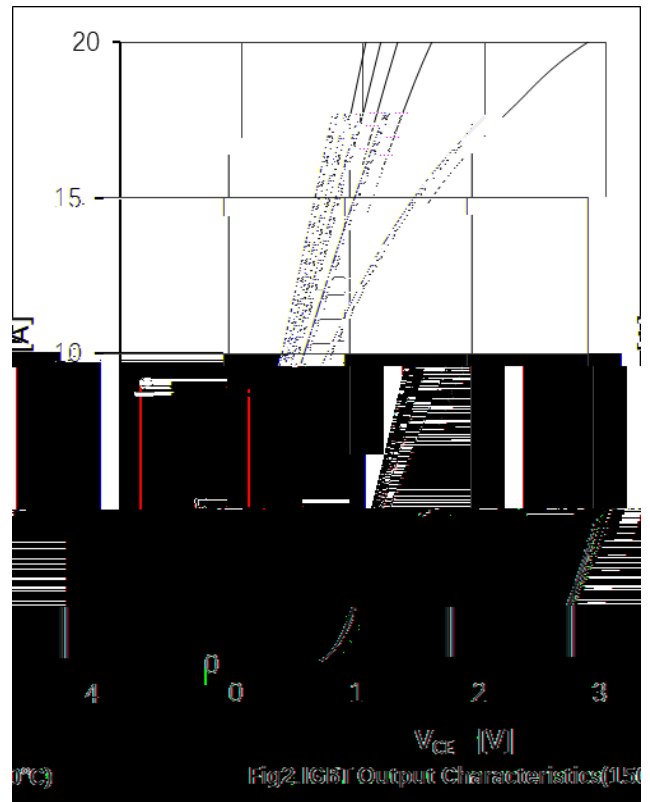
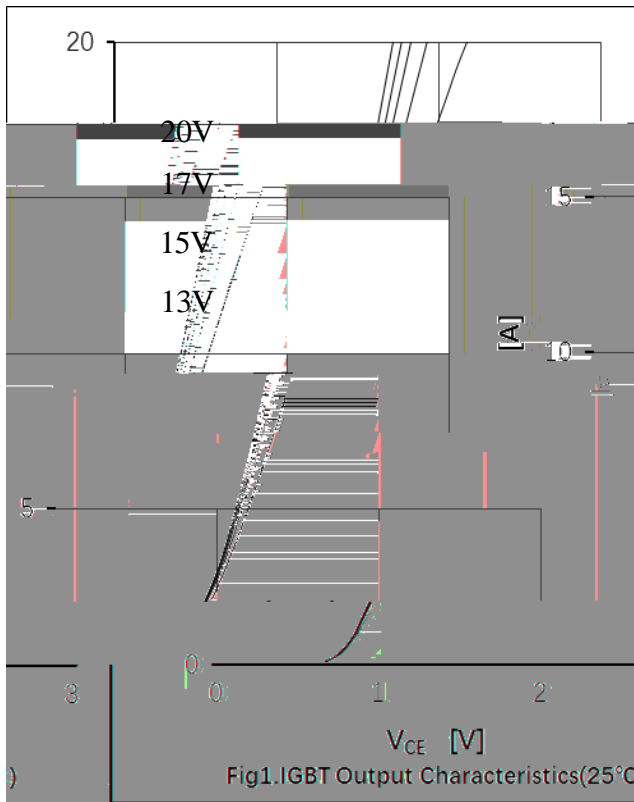
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Dynamic , at T<sub>j</sub>= 25</b>						
Reverse Recovery Current	I <sub>rr</sub>	I <sub>F</sub> =10A, V <sub>R</sub> =300V, -di/dt= 365	-	6	-	A
Diode reverse recovery time	t <sub>rr</sub>		-	176	-	ns
Reverse Recovery Charge	Q <sub>rr</sub>		-	0.12	-	uC
Reverse Recovery Energy	E <sub>rec</sub>		-	0.05	-	mJ
<b>Dynamic , at T<sub>j</sub>= 125</b>						

Reverse Recovery Current      I<sub>rr</sub>

I<sub>F</sub>=10A,



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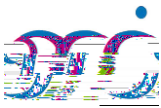




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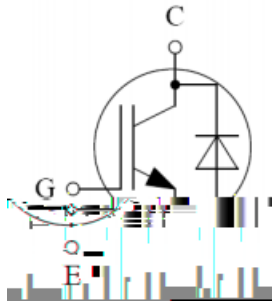


# DGF10N65CTL0



# DGF10N65CTL0

a



## Package Outline Information

### CASE: TO-220F package information



SYMBOL	单位: mm			SYMBOL	单位: mm			SYMBOL	单位: mm		
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.
A	4.40	4.50	4.60	F	10.00	10.16	10.30	ØD2	3.30	3.40	3.50
A1	2.34	2.51	2.64	F1	9.64	10.06	10.00	ØD1	3.10	3.20	3.30
A2	4.20	4.50	4.80	A2'	2.00	2.26	2.00	ØD'	3.40	3.50	3.60
A3				A3'	1.00	1.00	1.00	F2	1.40	1.50	1.60
b1	1.18	1.20	1.24	F3	13.80	13.90	14.00	F3	3.20	3.30	3.40
b2	0.75	0.80	0.85	G1	6.00	7.00	7.10	K1	0.08	0.09	0.10
b3	1.70	1.30	1.00	K2	0.08	0.09	0.10	L	12.76	12.96	13.16
c	0.46	0.50	0.53	L1	0.04	0.05	0.06	ØDP	3.08	3.16	3.2
D	15.67	15.67	16.07	e	2.50	2.54	2.58	Q	6.50PEF		
e	0.04	0.05	0.06	e1	5.08PEF						



# DGF10N65CTL0

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