

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

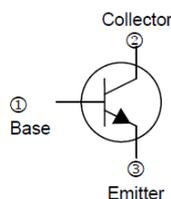
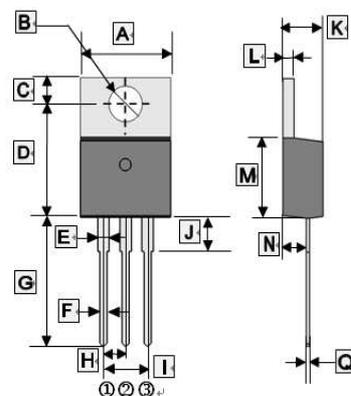
FEATURES

- Power switching applications

CLASSIFICATION OF t_s

Product-Rank	3DD13007-A	3DD13007-B	3DD13007-C
Range	3-4(μ s)	4-5(μ s)	5-6(μ s)

TO-220J



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	10.010	10.350	I	4.980	5.180
B	3.735	3.935	J	3.560	3.960
C	2.590	2.890	K	4.470	4.670
D	12.060	12.460	L	1.200	1.400
E	1.170	1.370	M	8.500	8.900
F	0.710	0.910	N	2.520	2.820
G	13.400	13.800	Q	0.330	0.650
H	2.540 TYP.				

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CB0}	700	V
Collector to Emitter Voltage	V_{CE0}	400	V
Emitter to Base Voltage	V_{EB0}	9	V
Collector Current - Continuous	I_C	8	A
Collector Power Dissipation	P_C	2	W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector to Base Breakdown Voltage	$V_{(BR)CB0}$	700	-	-	V	$I_C=1\text{mA}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CE0}$	400	-	-	V	$I_C=10\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EB0}$	9	-	-	V	$I_E=1\text{mA}, I_C=0$
Collector Cut - Off Current	I_{CB0}	-	-	100	μA	$V_{CB}=700\text{V}, I_E=0$
Collector Cut - Off Current	I_{CE0}	-	-	100		$V_{CE}=400\text{V}, I_B=0$
Emitter Cut - Off Current	I_{EB0}	-	-	100	μA	$V_{EB}=9\text{V}, I_C=0$
DC Current Gain	h_{FE}	20	-	30		$V_{CE}=5\text{V}, I_C=2\text{A}$
		5	-	-		$V_{CE}=5\text{V}, I_C=8\text{A}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	1	V	$I_C=2\text{A}, I_B=0.4\text{A}$
		-	-	2	V	$I_C=5\text{A}, I_B=1\text{A}$
		-	-	3	V	$I_C=8\text{A}, I_B=2\text{A}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C=2\text{A}, I_B=0.4\text{A}$
		-	-	1.6	V	$I_C=5\text{A}, I_B=1\text{A}$
Transition Frequency	f_T	-	4	-	MHz	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=1\text{MHz}$
Fall time	t_F	-	0.5	-	μs	$I_C=500\text{mA}, (UI9600)$
Storage time	t_S	3	-	6	μs	$I_C=500\text{mA}, (UI9600)$

CHARACTERISTICS CURVE

