

BDY55 – BDY56

NPN SILICON TRANSISTORS, DIFFUSED MESA

The BDY55 and BDY56 are mounted in TO-3 metal package. LF Large Signal Power Amplification High Current Fast Switching. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit		
V _{CEO} (Collector-Emitter Voltage		BDY55	60	V	
			BDY56	120	v	
V	Collector Rose Voltage		BDY55	100	V	
V _{сво}	Collector-Base Voltage		BDY56	150	v	
V _{EBO}	Emitter-Base Voltage			7	V	
I _C	Collector Current		15	А		
I _B	Base Current		7	А		
Ρτοτ	Power Dissipation	@ T _C = 25°		117	W	
TJ	Junction Temperature		200	°C		
Ts	Storage Temperature			-65 to +200	C	

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R _{thJ-C}	Thermal Resistance, Junction to Case 1.5		°C/W



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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condi	tion(s)	Min	Тур	Мах	Unit
V _{CEO(SUS)}	Collector-Emitter Breakdown	I _C = 200 mA	BDY55	60	-	-	V
V CEO(SUS)	Voltage (*)	$I_B = 0$	BDY56	120	-	-	v
I _{CEO}	Collector-Emitter Cutoff	V _{CE} = 30 V	BDY55	-	-	0.7	mA
-CEU	Current	V _{CE} = 60 V	BDY56	-	-	0.5	
I _{EBO}	Emitter-Base Cutoff Current	$V_{EB} = 7 V$	BDY55 BDY56	-	-	5	mA
I _{CEX}		V _{CE} = 100 V V _{BE} = -1.5 V		-	-	5	
	Collector-Emitter Cutoff	ollector-Emitter Cutoff $V_{CE} = 100 V$ $V_{BE} = -1.5 V$ $T_{CASE} = 150^{\circ}C$ -	-	30			
	Current	V _{CE} = 150 V V _{BE} = -1.5 V		-	-	3	mA
		$V_{CE} = 150 V$ $V_{BE} = -1.5 V$ $T_{CASE} = 150^{\circ}C$	BDY56	-	-	30	
	Collector-Emitter saturation	$I_{\rm C} = 4.0 \text{ A}$ $I_{\rm B} = 0.4 \text{ A}$	BDY55 BDY56		-	1.1	v
V _{CE(SAT)}	Voltage (*)	I _C = 10 A I _B = 3.3 A	BDY55 BDY56		-	2.5	V
V _{CE(SAT)}	Collector-Emitter saturation Voltage (*)	$I_{\rm C} = 10 \text{ A}$ $I_{\rm B} = 3.3 \text{ A}$	BDY55 BDY56		-	2.5	
V _{BE}	Base-Emitter Voltage (*)	$I_{C} = 4.0 \text{ A}$ $V_{CE} = 4.0 \text{ V}$	BDY55 BDY56		-	1.8	V
	Static Forward Current	$V_{CE} = 4 V$ $I_{C} = 4 A$	4 A BDY56 20 -	70			
H _{FE}	transfer ratio (*)	$V_{CE} = 4 V$ $I_C = 10 A$	BDY55 BDY56	10			
f _T	Transition Frequency	$V_{CE} = 4.0 V$ $I_{C} = 1.0 A$,	BDY55	10	-	-	MHz
-		f = 10 MHz $I_c = 5 \text{ A}$	BDY56 BDY55				
t _d + t _r	Turn-on time	I _B = 1 A	BDY55 BDY56		-	0.5	μS
t _s + t _f	Turn-off time	$I_{C} = 5 A$ $I_{B1} = 1 A$	BDY55		-	2	μS
us T uj		$I_{B2} = -0.5 \text{ A}$	BDY56				

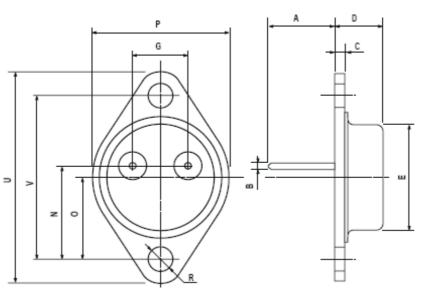
(*) Pulse Width $\approx 300~\mu s,$ Duty Cycle $\angle ~2.0\%$



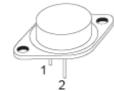
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MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)			
	min	max	
A	11	13.10	
В	0.97	1.15	
С	1.5	1.65	
D	8.32	8.92	
F	19	20	
G	10.70	11.1	
N	16.50	17.20	
Р	25	26	
R	4	4.09	
U	38.50	39.30	
V	30	30.30	



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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