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_{CBO}	Collector-Base Voltage	BDY55	100	V
		BDY56	150	
V_{EBO}	Emitter-Base Voltage		7	V
I_C	Collector Current		15	A
I_B	Base Current		7	A
P_{TOT}	Power Dissipation	@ T_C = 25°	117	W
T_J	Junction Temperature		200	°C
T_S	Storage Temperature		-65 to +200	

THERMAL CHARACTERISTICS

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

BDY55 – BDY56

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

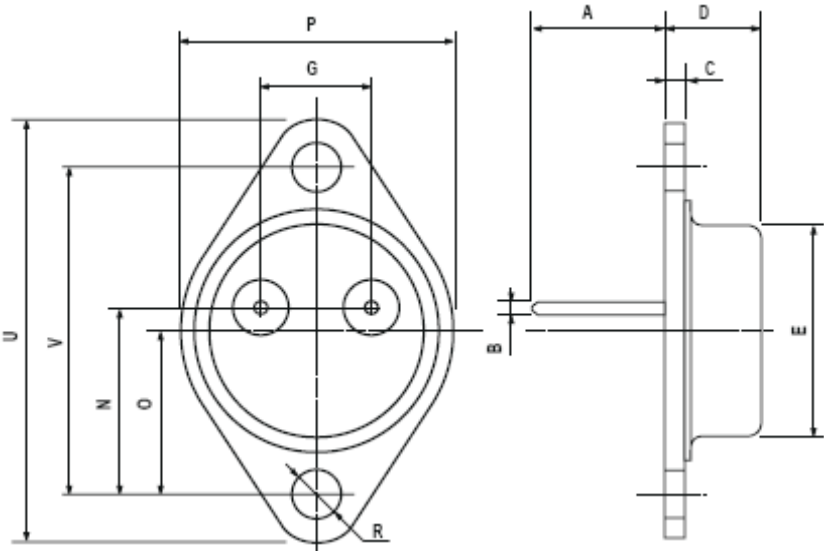
Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	I_C = 200 mA I_B = 0	BDY55	60	-	-	V
			BDY56	120	-	-	
I_{CEO}	Collector-Emitter Cutoff Current	V_{CE} = 30 V	BDY55	-	-	0.7	mA
		V_{CE} = 60 V	BDY56	-	-	0.5	
I_{EBO}	Emitter-Base Cutoff Current	V_{EB} = 7 V	BDY55	-	-	5	mA
			BDY56	-	-	3	
I_{CEX}	Collector-Emitter Cutoff Current	V_{CE} = 100 V V_{BE} = -1.5 V	BDY55	-	-	5	mA
		V_{CE} = 100 V V_{BE} = -1.5 V T_{CASE} = 150°C		-	-	30	
		V_{CE} = 150 V V_{BE} = -1.5 V	BDY56	-	-	3	
		V_{CE} = 150 V V_{BE} = -1.5 V T_{CASE} = 150°C		-	-	30	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C = 4.0 A I_B = 0.4 A	BDY55	-	-	1.1	V
			BDY56				
		I_C = 10 A I_B = 3.3 A	BDY55	-	-	2.5	
			BDY56				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C = 10 A I_B = 3.3 A	BDY55	-	-	2.5	
			BDY56				
V_{BE}	Base-Emitter Voltage (*)	I_C = 4.0 A V_{CE} = 4.0 V	BDY55	-	-	1.8	V
			BDY56				
H_{FE}	Static Forward Current transfer ratio (*)	V_{CE} = 4 V I_C = 4 A	BDY55	20	-	70	V
			BDY56				
		V_{CE} = 4 V I_C =10 A	BDY55	10			
			BDY56				
f_T	Transition Frequency	V_{CE} = 4.0 V I_C = 1.0 A, f = 10 MHz	BDY55	10	-	-	MHz
			BDY56				
$t_d + t_r$	Turn-on time	I_C = 5 A I_B = 1 A	BDY55	-	-	0.5	µs
			BDY56				
$t_s + t_f$	Turn-off time	I_C = 5 A I_{B1} = 1 A I_{B2} = -0.5 A	BDY55	-	-	2	µs
			BDY56				

(*) Pulse Width ≈ 300 µs, Duty Cycle ∠ 2.0%

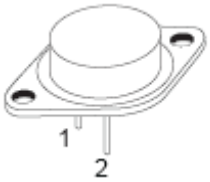
BDY55 – BDY56

MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	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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