



NPN BDY57 – BDY58

SILICON TRANSISTORS, DIFFUSED MESA

The BDY57 and BDY58 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	BDY57	80	V
		BDY58	125	
V_{CBO}	Collector-Base Voltage	BDY57	120	V
		BDY58	160	
V_{EBO}	Emitter-Base Voltage		10	V
I_C	Collector Current		25	A
I_B	Base Current		6	A
P_{TOT}	Power Dissipation	@ TC = 25°	175	W
$T_{J TS}$	Junction Temperature Storage Temperature		-65 to +200	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-C}	Thermal Resistance, Junction to Case	1	°C/W

NPN BDY57 – BDY58

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

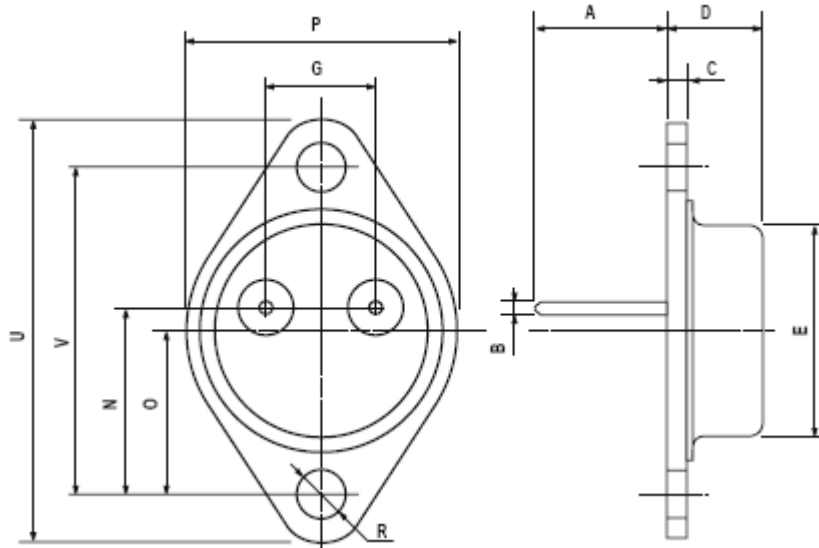
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit		
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C= 100\text{ mA}, I_B= 0$	BDY57	80	-	-	V	
			BDY58	125	-	-		
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (*)	$I_C= 5\text{ mA}, I_E= 0$	BDY57	120	-	-	V	
			BDY58	160	-	-		
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (*)	$I_E= 5\text{ mA}, I_C= 0$	BDY57	10	-	-	V	
			BDY58					
I_{CBO}	Collector-Base Cutoff Current	$V_{CB}= 120\text{ V}, I_E=0\text{ V}$	BDY57	-	-	1.0	mA	
			BDY58	-	-	0.5		
I_{CER}	Collector-Emitter Cutoff Current	$V_{CE}= 80\text{ V}, R_{BE}= 10\ \Omega$ $T_{CASE}= 100^\circ\text{C}$	BDY57	-	-	10	mA	
			BDY58					
I_{EBO}	Emitter-Base Cutoff Current	$V_{EB}= 10\text{ V}, I_C= 0\text{ V}$	BDY57	-	0.25	0.5	mA	
			BDY58					
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C= 10\text{ A}, I_B= 1\text{ A}$	BDY57	-	0.5	1.4	V	
			BDY58					
h_{21E}	Static Forward Current transfer ratio (*)	$V_{CE}= 4\text{ V}, I_C= 10\text{ A}$	BDY57	20	-	60	V	
			BDY58					
		$V_{CE}= 4\text{ V}, I_C= 20\text{ A}$	BDY57	-	15	-		-
			BDY58					
		$V_{CE}= 4\text{ V}, I_C= 10\text{ A}$ $T_{CASE}= -30^\circ\text{C}$	BDY57	10	-	-		-
			BDY58					
f_T	Transition Frequency	$V_{CE}= 15\text{ V}, I_C= 1\text{ A}$ $f= 10\text{ MHz}$	BDY57	10	30	-	MHz	
			BDY58					
t_{d+tr}	Turn-on time	$I_C= 15\text{ A}, I_B= 1.5\text{ A}$	BDY57	-	0.25	1	μs	
			BDY58					
t_{s+tf}	Turn-off time	$I_C= 15\text{ A}, I_{B1}= 1.5\text{ A}$ $I_{B2}= -1.5\text{ A}$	BDY57	-	1	2	μs	
			BDY58					

(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $< 2.0\%$

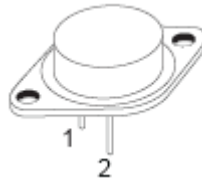
NPN BDY57 – BDY58

MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)			
	min	typ	max
A	11	-	13.10
B	0.97	-	1.15
C	1.5	-	1.65
D	8.32	-	8.92
E	19	-	22
G	10.70	-	11.1
N	16.50	-	17.20
P	25	-	27,20
R	3.84	-	4.21
U	38.50	-	40.13
V	29.90	-	30.40



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



Revised

April 2016

Information furnished is believed to be accurate and reliable. However, Comset Semiconductors assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. Data are subject to change without notice. Comset Semiconductors makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Comset Semiconductors assume any liability arising out of the application or use of any product and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Comset Semiconductors' products are not authorized for use as critical components in life support devices or systems.



NPN BDY57 – BDY58

www.comsetsemi.com

info@comsetsemi.com