



# COMSET

## SEMICONDUCTORS

**BDY26, 183 T2**

**BDY27, 184 T2**

**BDY28, 185 T2**

### **NPN SILICON TRANSISTORS, DIFFUSED MESA**

LF Large Signal Power Amplification  
High Current Fast Switching

#### **ABSOLUTE MAXIMUM RATINGS**

<b>Symbol</b>	<b>Ratings</b>		<b>Value</b>	<b>Unit</b>	
$V_{CEO}$	<i>Collector-Emitter Voltage</i>	<b>BDY26, 183T2</b>	180	V	
		<b>BDY27, 184T2</b>	200		
		<b>BDY28, 185T2</b>	250		
$V_{CBO}$	<i>Collector-Base Voltage</i>	<b>BDY26, 183T2</b>	300	V	
		<b>BDY27, 184T2</b>	400		
		<b>BDY28, 185T2</b>	500		
$V_{EBO}$	<i>Emitter-Base Voltage</i>	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	10	V	
$I_C$	<i>Collector Current</i>	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	6	A	
$I_B$	<i>Base Current</i>	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	3	A	
$P_{TOT}$	<i>Power Dissipation</i>	@ $T_C = 25^\circ$	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	87.5	Watts
$T_J$	<i>Junction Temperature</i>		<b>BDY26, 183T2</b> <b>BDY27, 184T2</b>	-65 to +200	°C
$T_S$	<i>Storage Temperature</i>		<b>BDY28, 185T2</b>		



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### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	BDY26, 183T2 BDY27, 184T2 BDY28, 185T2	2 °C/W

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CEO(BR)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=50\text{ mA}, I_B=0$	BDY26, 183T2	180	-	-	V
			BDY27, 184T2	200	-	-	
			BDY28A, 185T2A	250	-	-	
			BDY28B, 185T2B	250	-	-	
			BDY28C, 185T2C	220	-	-	
$I_{CEO}$	Collector-Emitter Cutoff Current	$V_{CE}=180\text{ V}$	BDY26	-	-	1.0 mA	
		$V_{CE}=200\text{ V}$	BDY27	-	-		
		$V_{CE}=250\text{ V}$	BDY28	-	-		
$I_{EBO}$	Emitter-Base Cutoff Current	$V_{EB}=10\text{ V}$	BDY26, 183T2 BDY27, 184T2 BDY28, 185T2	-	-	1.0 mA	
$I_{CES}$	Collector-Emitter Cutoff Current	$V_{CE}=250\text{ V}$ $V_{BE}=0\text{ V}$	BDY26, 183T2	-	-	1.0 mA	
		$V_{CE}=300\text{ V}$ $V_{BE}=0\text{ V}$	BDY27, 184T2	-	-		
		$V_{CE}=400\text{ V}$ $V_{BE}=0\text{ V}$	BDY28, 185T2	-	-		



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$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=2.0\text{ A}, I_B=0.25\text{ A}$	<b>BDY26, 183T2</b>	-	-	0.6	V
			<b>BDY27, 184T2</b>	-	-		
			<b>BDY28, 185T2</b>	-	-		
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (*)	$I_C=3\text{ mA}$	<b>BDY26, 183T2</b>	300	-	-	V
			<b>BDY27, 184T2</b>	400	-	-	
			<b>BDY28, 185T2</b>	500	-	-	
$V_{BE(SAT)}$	Base-Emitter Voltage (*)	$I_C=2.0\text{ A}, I_B=0.25\text{ A}$	<b>BDY26, 183T2</b>	-	-	1.2	V
			<b>BDY27, 184T2</b>	-	-		
			<b>BDY28, 185T2</b>	-	-		
$h_{21E}$	Static Forward Current transfer ratio (*)	$V_{CE}=4\text{ V}, I_C=1\text{ A}$	<b>A</b>	-	55	-	-
			<b>B</b>	-	65	-	
			<b>C</b>	-	90	-	
		$V_{CE}=4\text{ V}, I_C=2\text{ A}$	<b>A</b>	15	20	45	
			<b>B</b>	30	45	90	
			<b>C</b>	75	82	180	
$f_T$	Transition Frequency	$V_{CE}=15\text{ V}, I_C=0.5\text{ A}, f=10\text{ MHz}$	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	10	-	-	MHz
$t_d + t_r$	Turn-on time	$I_C=5\text{ A}, I_B=1\text{ A}$	<b>BDY26, 183T2</b> <b>BDY27, 184T2</b> <b>BDY28, 185T2</b>	-	-	1	$\mu\text{s}$
$t_s + t_f$	Turn-off time	$I_C=5\text{ A}, I_{B1}=1\text{ A}, I_{B2}=-1\text{ A}$	<b>A</b> <b>B</b> <b>C</b>	-	-	2 3.5 6	$\mu\text{s}$

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



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SEMICONDUCTORS

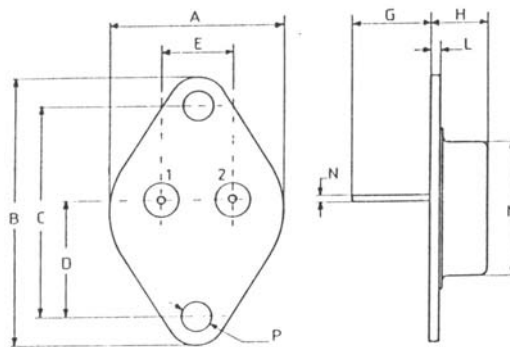
**BDY26, 183 T2**

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**BDY28, 185 T2**

## MECHANICAL DATA

DIMENSIONS	
	mm
A	25,45
B	38,8
C	30,09
D	17,11
E	9,78
G	11,09
H	8,33
L	1,62
M	19,43
N	1
P	4,08



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector