

2N1483, 2N1484, 2N1485,



NPN Medium Power Silicon Transistor

Rev. V2

Features

- Available in JAN, JANTX and JANTXV per MIL-PRF-19500/180
- TO-8 Package
- Ideal For Medium Power Applications That Require High Frequency Switching in a Low Profile Package



Electrical Characteristics $T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Test Conditions	Symbol	Units	Min.	Max.
Collector - Emitter Breakdown Voltage	$I_C = 100 \text{ mA dc}$ 2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CEO}$	V dc	40 55	—
Collector - Emitter Breakdown Voltage	$V_{EB} = 1.5 \text{ V dc}$, $I_C = 0.25 \text{ mA dc}$ 2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CEX}$	V dc	—	60 100
Collector - Base Breakdown Voltage	$I_C = 100 \mu\text{A dc}$ 2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CBO}$	V dc	—	60 100
Emitter - Base Cutoff Current	$V_{EB} = 12 \text{ V dc}$	I_{EBO}	$\mu\text{A dc}$	—	15
Collector - Emitter Cutoff Current	$V_{EB} = 1.5 \text{ V dc}$ $V_{CB} = 60 \text{ V dc}$, 2N1483, 2N1485 $V_{CB} = 100 \text{ V dc}$, 2N1484, 2N1486	I_{CEX}	mA dc		.25 .25
Collector - Base Cutoff Current	$V_{CB} = 30 \text{ V dc}$, 2N1483, 2N1485 $V_{CB} = 50 \text{ V dc}$, 2N1484, 2N1486	I_{CBO1}	$\mu\text{A dc}$		15 15
Forward Current Transfer Ratio	$V_{CE} = 4.0 \text{ Vdc}$, $I_C = 750 \text{ mA dc}$ 2N1483, 2N1484 2N1485, 2N1486	h_{FE2}	-	20 35	60 100
Base - Emitter Voltage (non-saturated)	$V_{CE} = 4.0\text{V dc}$, $I_C = 750 \text{ mA dc}$	V_{BE}	V dc		2.0
Collector - Emitter Saturation Voltage	$I_C = 750 \text{ mA dc}$ $I_B = 75 \text{ mA dc}$ 2N1483, 2N1484 $I_B = 40 \text{ mA dc}$ 2N1485, 2N1486	$V_{CE(SAT)}$	V dc	—	1.20 0.75

2N1483, 2N1484, 2N1485,



NPN Medium Power Silicon Transistor

Rev. V2

Electrical Characteristics ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Test Conditions	Symbol	Units	Min.	Max.
Collector - Base Cutoff Current	$V_{CB} = 60\text{ V dc}$, 2N1483, 2N1485 $V_{CB} = 100\text{ V dc}$, 2N1484, 2N1486	I_{CBO3}	$\mu\text{A dc}$	—	100 100
Collector - Base Cutoff Current	$T_A = +175^\circ\text{C}$ $V_{CB} = 30\text{ V dc}$, 2N1483, 2N1485 $V_{CB} = 50\text{ V dc}$, 2N1484, 2N1486	I_{CBO2}	mA		1.0 1.0
Forward - Current Transfer Ratio	$T_A = -55^\circ\text{C}$ $V_{CE} = 4.0\text{ V dc}$, $I_C = 750\text{ mA dc}$ 2N1483, 2N1484 2N1485, 2N1486	h_{FE2}	-	10 17	
Dynamic Characteristics					
Small Signal, Short Circuit, Forward-Current Transfer Ratio Cutoff Frequency	$V_{CB} = 28\text{ V dc}$, $I_C = 5.0\text{ mA dc}$	f_{hfb}	kHz	600	
Open Circuit Output Capacitance	$V_{CB} = 10\text{ V dc}$, $I_E = 0$, $100\text{ kHz} \leq f \leq 1\text{ MHz}$	C_{obo}	pF	—	400
Switching Characteristics					
Pulse Response	$V_{CC} = +12\text{V dc}$, $R_C = 15.9\ \Omega$, $I_{B0} = I_{B2} = 35\text{ mA dc}$; $I_{B1} = 65\text{ mA dc}$	$t_{on} + t_{off}$	μs	—	25

Absolute Maximum Ratings ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Ratings	Symbol	2N1483 2N1485	2N1484 2N1486
Collector - Emitter Voltage	V_{CEO}	40 V dc	55 V dc
Collector - Base Voltage	V_{CBO}	60 V dc	100 V dc
Emitter - Base Voltage	V_{EBO}	12 V dc	
Collector Current	I_C	3.0 A dc	
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ ⁽¹⁾ @ $T_C = 25^\circ\text{C}$ ⁽²⁾	P_T	1.75 W 25 W	
Operating & Storage Temperature Range	T_J, T_{STG}	-65°C to +200°C	

(1) Derate linearly 0.010 W/°C for $T_A > +25^\circ\text{C}$

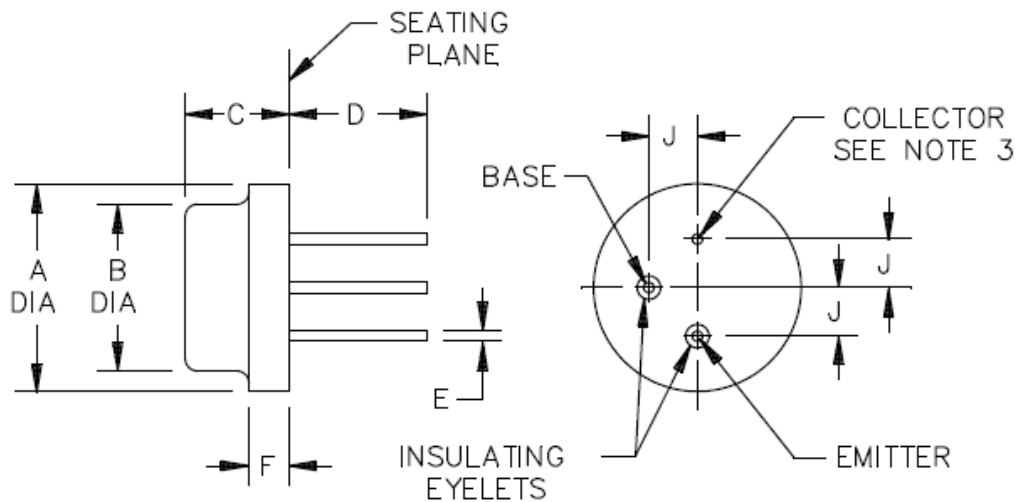
(2) Derate linearly 0.143 W/°C for $T_C > +25^\circ\text{C}$

2N1483, 2N1484, 2N1485,

NPN Medium Power Silicon Transistor

Rev. V2

Outline Drawing (TO-8)



LTR	Dimensions				Notes	LTR	Dimensions				Notes
	Inches		Millimeters				Inches		Millimeters		
	Min	Max	Min	Max			Min	Max	Min	Max	
A	.550	.650	13.97	16.51		E	.027	.033	0.69	0.84	3, 4
B	.444	.524	11.28	13.31		F		.115		2.92	
C	.270	.330	6.86	8.38		J	.136	.146	3.45	3.71	
D	.360	.440	9.14	11.18	3						

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. The collector shall be internally connected to the case.
3. All three leads.
4. Measured in the zone beyond .050 (1.27 mm) front the seating plane.

FIGURE 1. Dimensions and configuration of TO-8 package.

2N1483, 2N1484, 2N1485,



NPN Medium Power Silicon Transistor

Rev. V2

VPT COMPONENTS. ALL RIGHTS RESERVED.

Information in this document is provided in connection with VPT Components products. These materials are provided by VPT Components as a service to its customers and may be used for informational purposes only. Except as provided in VPT Components Terms and Conditions of Sale for such products or in any separate agreement related to this document, VPT Components assumes no liability whatsoever. VPT Components assumes no responsibility for errors or omissions in these materials. VPT Components may make changes to specifications and product descriptions at any time, without notice. VPT Components makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF VPT COMPONENTS PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. VPT COMPONENTS FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. VPT COMPONENTS SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

VPT Components products are not intended for use in medical, lifesaving or life sustaining applications. VPT Components customers using or selling VPT Components products for use in such applications do so at their own risk and agree to fully indemnify VPT Components for any damages resulting from such improper use or sale.