

2N3583  
2N3584  
2N3585

**NPN SILICON TRANSISTOR**



**TO-66 CASE**

**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$ )

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N3583 Series types are NPN Silicon Transistors designed for high speed switching and high voltage amplifier applications.

**MARKING: FULL PART NUMBER**

SYMBOL	<u>2N3583</u>	<u>2N3584</u>	<u>2N3585</u>	UNITS
$V_{CBO}$	250	375	500	V
$V_{CEO}$	175	250	300	V
$V_{EBO}$	6.0	6.0	6.0	V
$I_C$	1.0	2.0	2.0	A
$I_{CM}$		5.0		A
$I_B$		1.0		A
$P_D$		35		W
$T_J, T_{stg}$		-65 to +200		$^\circ\text{C}$
$\theta_{JC}$		5.0		$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	<u>2N3583</u>		<u>2N3584</u>		<u>2N3585</u>		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CEV}$	$V_{CE}=225\text{V}, V_{EB}=1.5\text{V}$	-	1.0	-	-	-	-	mA
$I_{CEV}$	$V_{CE}=340\text{V}, V_{EB}=1.5\text{V}$	-	-	-	1.0	-	-	mA
$I_{CEV}$	$V_{CE}=450\text{V}, V_{EB}=1.5\text{V}$	-	-	-	-	-	1.0	mA
$I_{CEV}$	$V_{CE}=225\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$	-	3.0	-	-	-	-	mA
$I_{CEV}$	$V_{CE}=300\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$	-	-	-	3.0	-	3.0	mA
$I_{CEO}$	$V_{CE}=150\text{V}$	-	10	-	5.0	-	5.0	mA
$I_{EBO}$	$V_{BE}=6.0\text{V}$	-	5.0	-	0.5	-	0.5	mA
$BV_{CEO}$	$I_C=200\text{mA}$	175	-	250	-	300	-	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=125\text{mA}$	-	5.0	-	0.75	-	0.75	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$	-	-	-	1.4	-	1.4	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	-	1.4	-	1.4	-	1.4	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=100\text{mA}$	40	-	40	-	40	-	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40	200	-	-	-	-	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$	-	-	8.0	80	8.0	80	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	10	-	25	100	25	100	
$f_T$	$V_{CE}=10\text{V}, I_C=200\text{mA}, f=5.0\text{MHz}$	10	-	10	-	10	-	MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	120	-	120	-	120	pF
$h_{fe}$	$V_{CE}=30\text{V}, I_C=100\text{mA}, f=1.0\text{kHz}$	25	350	-	-	-	-	
$t_r$	$V_{CC}=200\text{V}, I_C=1.0\text{A}, I_{B1}=100\text{mA}, R_L=200\Omega$	-	-	-	3.0	-	3.0	$\mu\text{s}$
$t_s$	$V_{CC}=200\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$	-	-	-	4.0	-	4.0	$\mu\text{s}$
$t_f$	$V_{CC}=200\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$	-	-	-	3.0	-	3.0	$\mu\text{s}$
$I_{s/b}$	$V_{CE}=100\text{V}$	350	-	350	-	350	-	mA

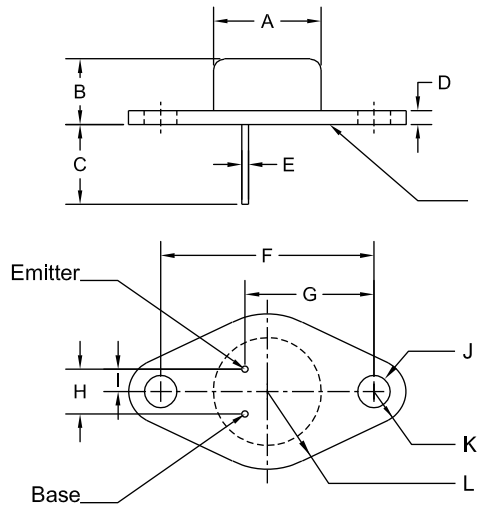
R2 (22-June 2011)

2N3583  
2N3584  
2N3585

NPN SILICON TRANSISTOR



TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:  
The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

R2

MARKING:  
FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.958	0.962	24.33	24.43
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.145		3.68	
L (RAD)	0.350		8.89	

TO-66 (REV:R2)

R2 (22-June 2011)