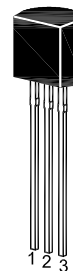


# ST 2SC1383 / 2SC1384

## NPN Silicon Epitaxial Planar Transistor

For low-frequency power amplification and driver Amplification. Complementary to 2SA683 to and 2SA684.

On special request, these transistors can be manufactured in different pin configurations.



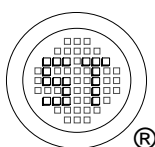
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit	
Collector Base Voltage	$V_{CBO}$	2SC1383 2SC1384	30 60	V
Collector Emitter Voltage		2SC1383 2SC1384	25 50	V
Emitter Base Voltage	$V_{EBO}$	5	V	
Collector Current	$I_C$	1	A	
Peak Collector Current	$I_{CP}$	1.5	A	
Power Dissipation	$P_{tot}$	1	W	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$	

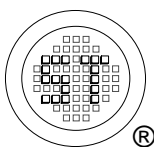
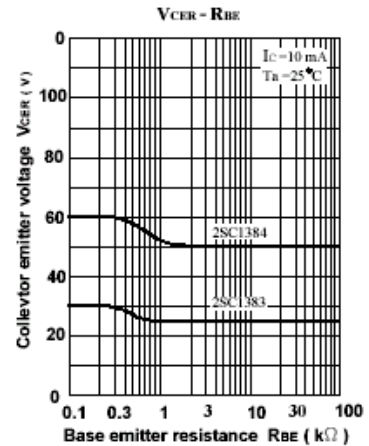
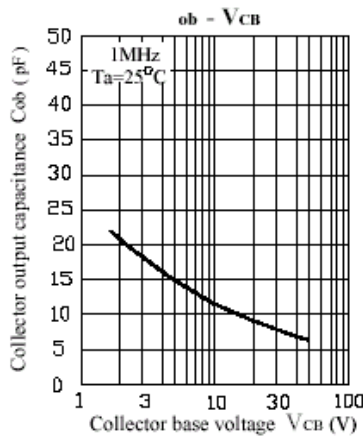
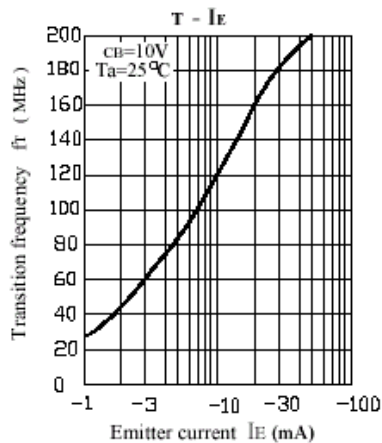
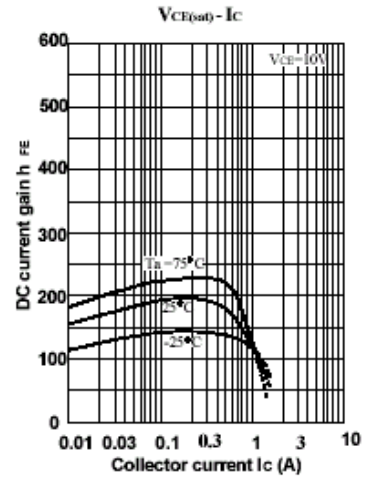
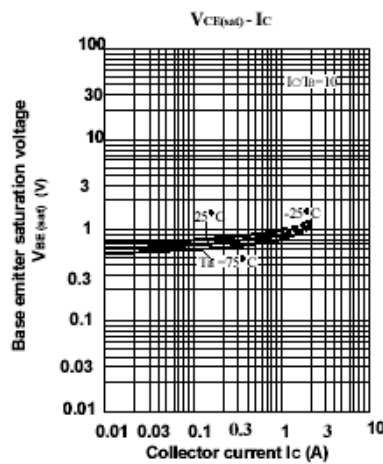
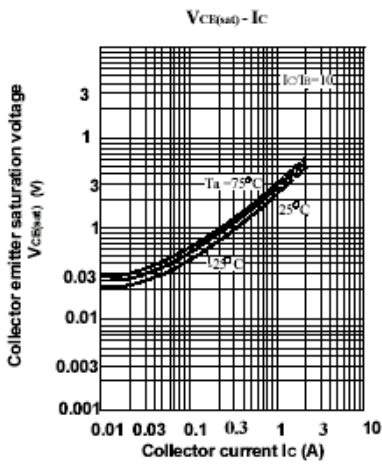
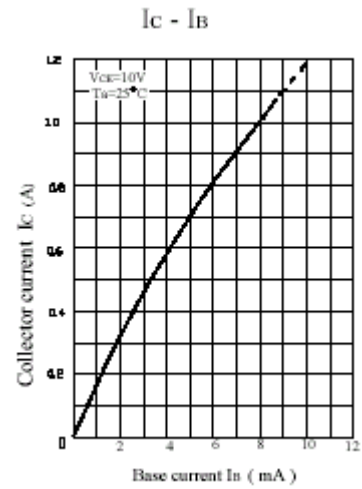
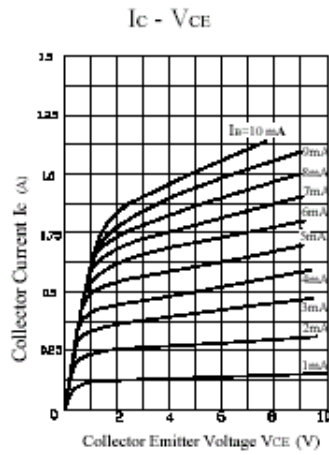
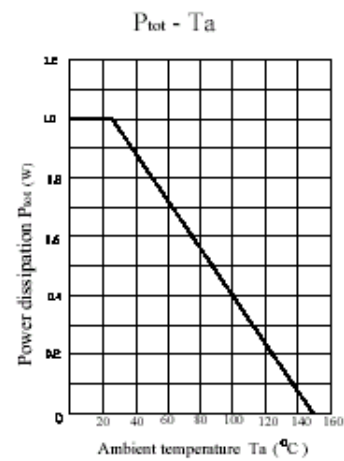
### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 10\text{ V}$ , $I_C = 500\text{ mA}$  at $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ A}$	Current Gain Group Q R S	$h_{FE}$	85	-	170	-
		$h_{FE}$	120	-	240	-
		$h_{FE}$	170	-	340	-
		$h_{FE}$	50	100	-	-
Collector Base Cutoff Current at $V_{CB} = 20\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	2SC1383	30	-	-	V
		2SC1384	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	2SC1383	25	-	-	V
		2SC1384	50	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V	
Base Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{BE(sat)}$	-	-	1.2	V	
Gain Bandwidth Product at $V_{CE} = 10\text{ V}$ , $-I_E = 50\text{ mA}$ , $f = 200\text{ MHz}$	$f_T$	-	200	-	MHz	
Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	11	20	pF	



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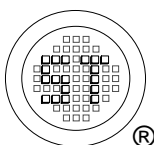
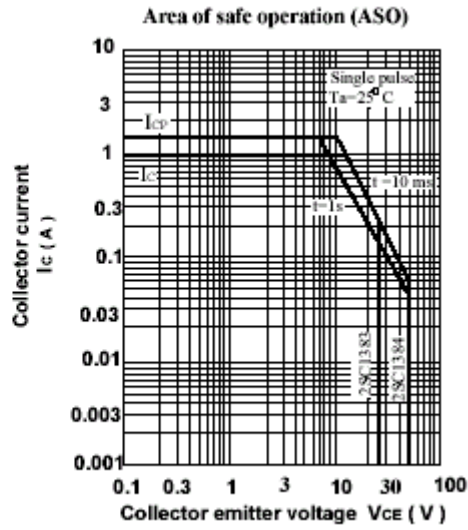
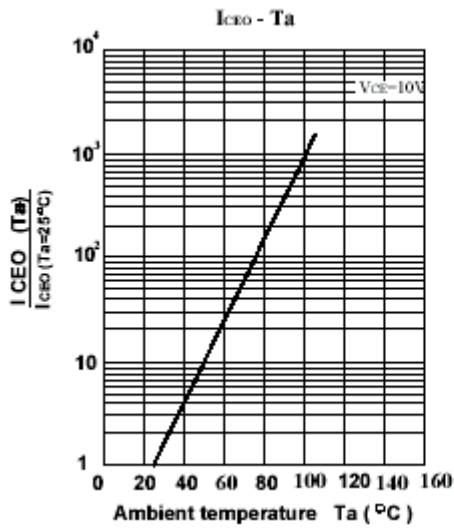




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# ST 2SC1383 / 2SC1384



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Dated : 07/12/2002