

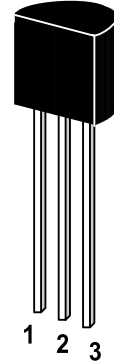
# ST 2SA733

## PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into five groups, R, O, Y, P and L, according to its DC current gain. As complementary type the NPN transistor ST 2SC945 is recommended.

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

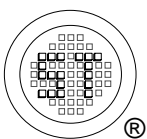


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package  
Weight approx. 0.19g

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

	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	150	mA
Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-55 to +150	$^\circ\text{C}$



## SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

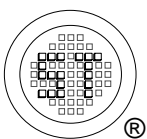


Dated : 12/07/2002

# ST 2SA733

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

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$					
Current Gain Group R	$h_{FE}$	40	-	80	-
O	$h_{FE}$	70	-	140	-
Y	$h_{FE}$	120	-	240	-
P	$h_{FE}$	200	-	400	-
L	$h_{FE}$	350	-	700	-
Collector Base Breakdown Voltage at $-I_C=100\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C=10\text{mA}$	$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E=10\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $-V_{CB}=60\text{V}$	$-I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter Cutoff Current at $-V_{EB}=5\text{V}$	$-I_{EBO}$	-	-	0.1	$\mu\text{A}$
Collector Saturation Voltage at $-I_C=100\text{mA}$ , $-I_B=10\text{mA}$	$-V_{CE(sat)}$	-	0.18	0.3	V
Base Emitter Voltage at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$	$-V_{BE(on)}$	0.5	0.62	0.8	V
Gain Bandwidth Product at $-V_{CE}=6\text{V}$ , $-I_C=10\text{mA}$	$f_T$	50	180	-	MHz
Output Capacitance at $-V_{CB}=10\text{V}$ , $f=1\text{MHz}$	$C_{OB}$	-	2.8	-	pF
Noise Figure at $-V_{CE}=6\text{V}$ , $-I_C=0.3\text{mA}$ $f=100\text{Hz}$ , $R_S=10\text{K}\Omega$	F	-	6	20	dB



**SEMTECH ELECTRONICS LTD.**

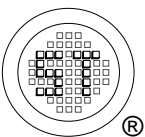
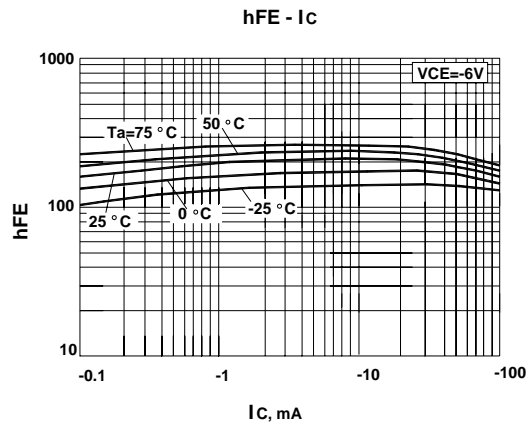
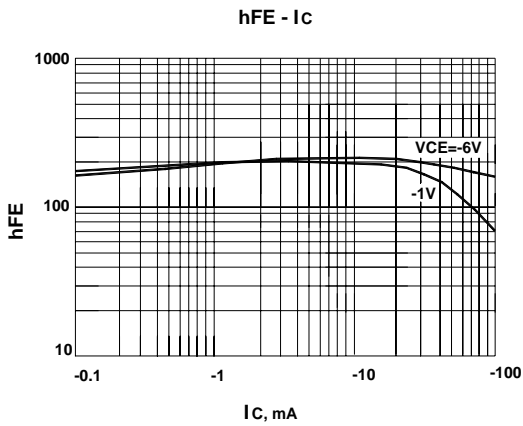
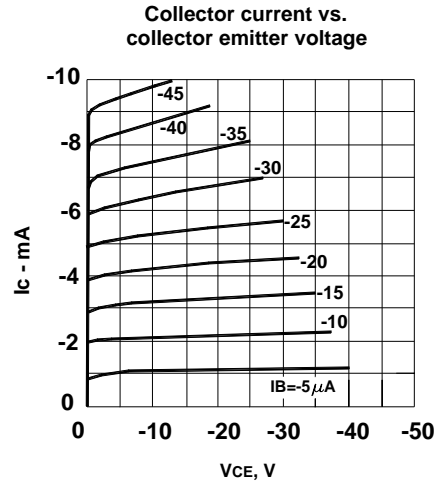
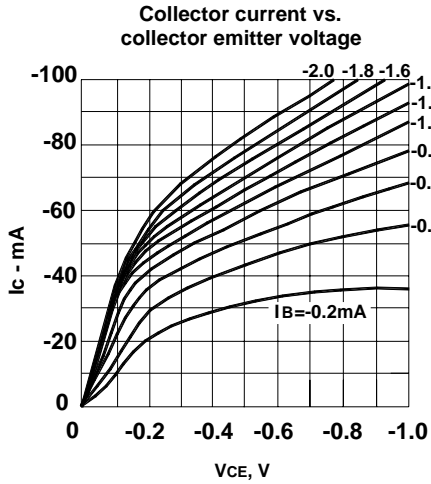
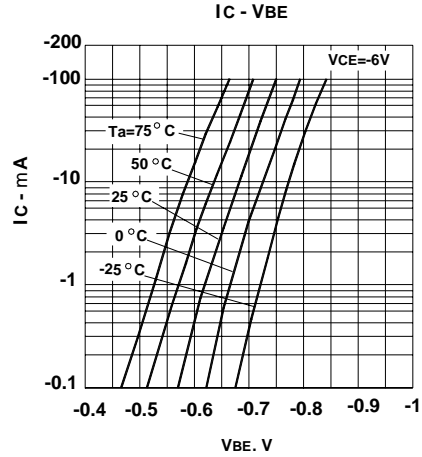
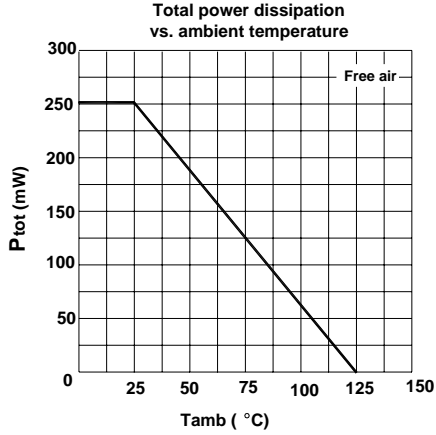
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002 Certificate No. 05103  
 ISO 14001:2004 Certificate No. 7116  
 ISO 9001:2000 Certificate No. 0508098

Dated : 12/07/2002

# ST 2SA733



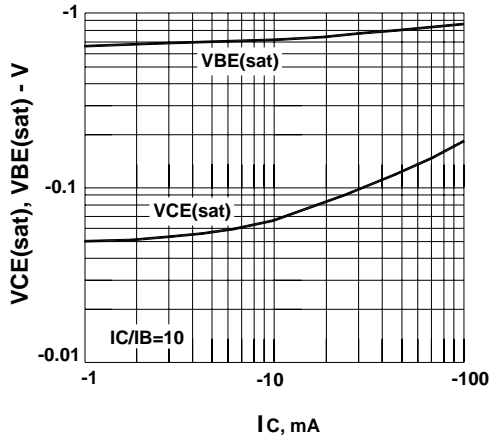
**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



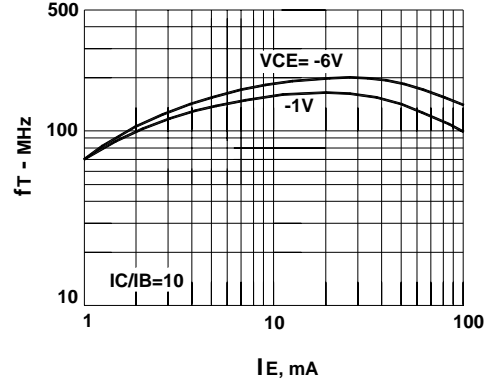
Dated : 12/07/2002

# ST 2SA733

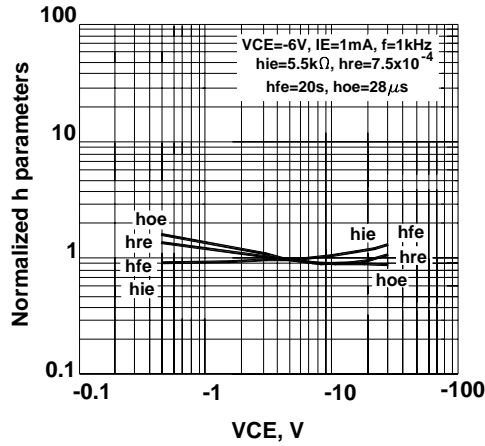
VCE(sat), VBE(sat) - IC



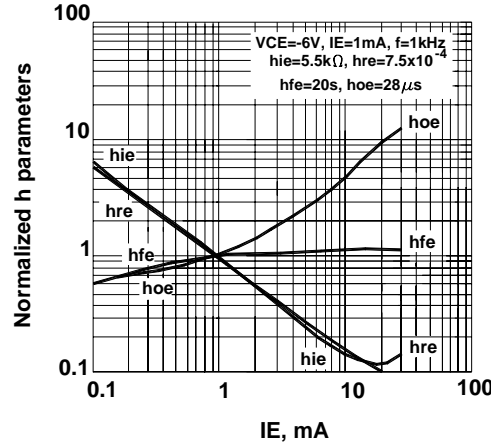
fT - IE



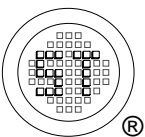
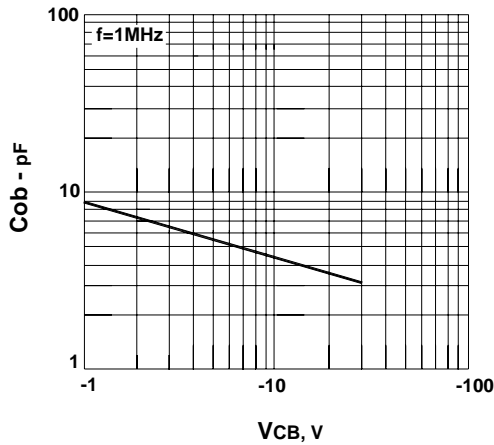
Normalized h-parameters vs. collector emitter voltage



Normalized h-parameters vs. emitter current



Cob - VCB



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



Dated : 12/07/2002