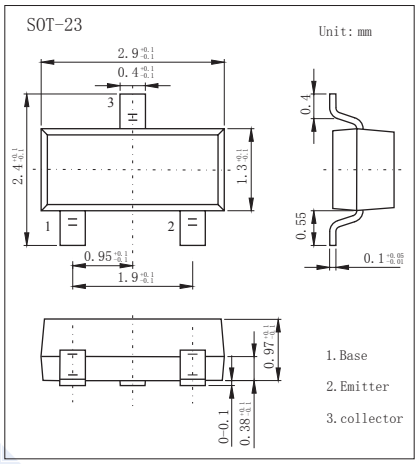
NPN Transistors

2SC2734



■ Features

- Collector Current Capability I_C=50mA
- Collector Emitter Voltage V_{CEO}=11V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	20	V
Collector - Emitter Voltage	V_{CEO}	11	
Emitter - Base Voltage	V_{EBO}	3	
Collector Current - Continuous	I_C	50	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, R_{BE} =∞	11			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	3			
Collector-base cut-off current	I_{CBO}	V_{CB}= 20 V , I_E= 0			0.5	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 3V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10 mA, I_B=5mA			0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=10 mA, I_B=5mA			1.2	
DC current gain	h_{FE}	V_{CE}= 10V, I_C= 5mA	20		200	
Conversion gain	CG	V_{CC} = 6 V, I_C = 2 mA, f=900 MHz, f_{OSC} = 930 MHz (0dBm), f_{out} = 30 MHz		15		dB
Noise figure	NF	V_{CC} = 6 V, I_C = 2 mA, f=900 MHz, f_{OSC} = 930 MHz (0dBm), f_{out} = 30 MHz		9		
Oscillating output voltage	V_{OSC}	V_{CC} = 6 V, I_C = 5 mA,f = 930 MHz		140		mV
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0,f=1MHz			1.5	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 10mA	1.4	3.5		GHz

■ Classification of h_{fe}

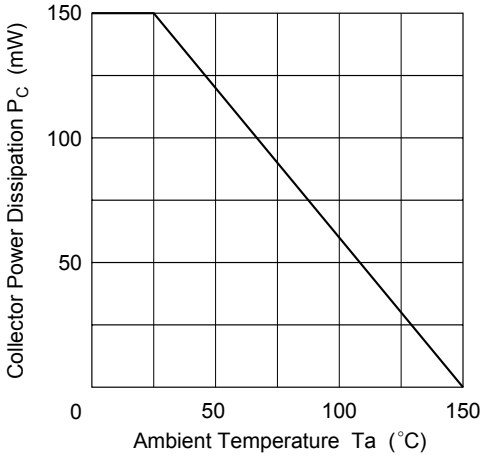
Type	2SC2734-GC	2SC2734-R25
Range	20-200	100-200
Marking	GC	R25.

NPN Transistors

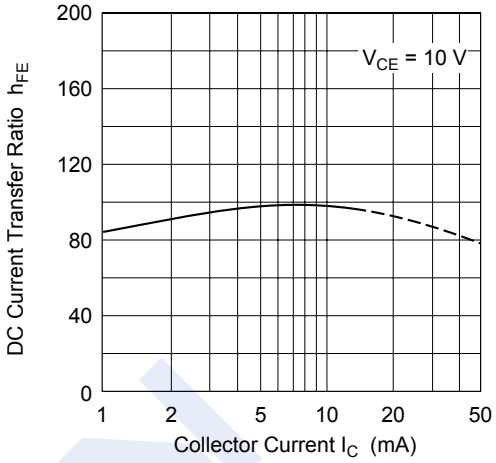
2SC2734

■ Typical Characterisitics

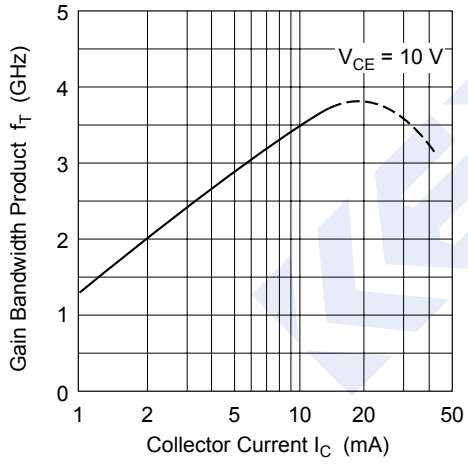
Maximum Collector Dissipation Curve



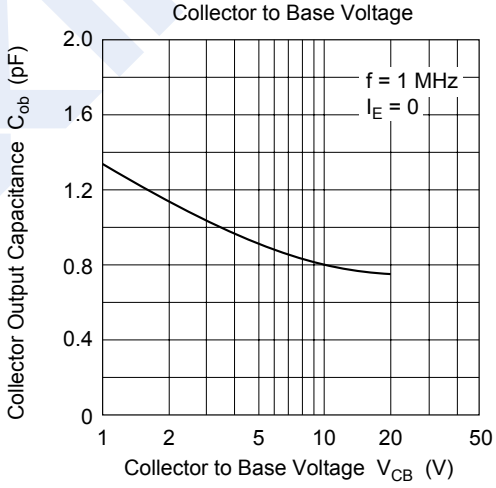
DC Current Transfer Ratio vs. Collector Current



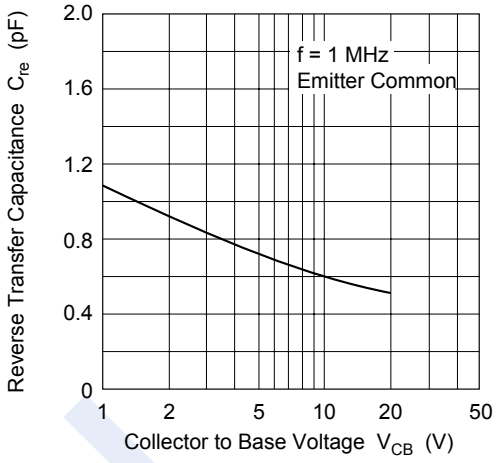
Gain Bandwidth Product vs. Collector Current



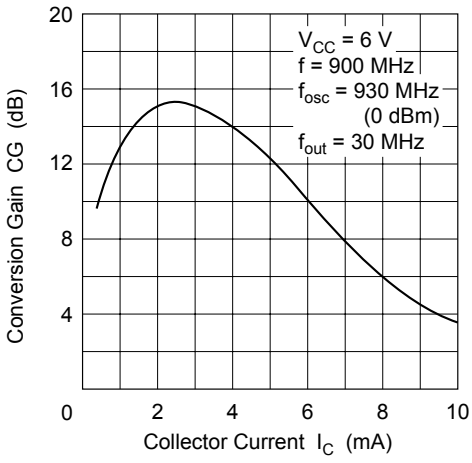
Collector Output Capacitance vs. Collector to Base Voltage



Reverse Transfer Capacitance vs. Collector to Base Voltage



Conversion Gain vs. Collector Current

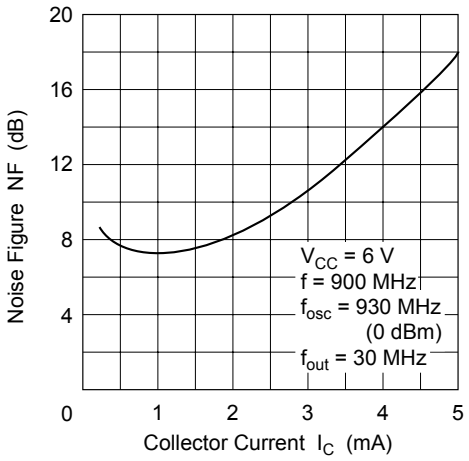


NPN Transistors

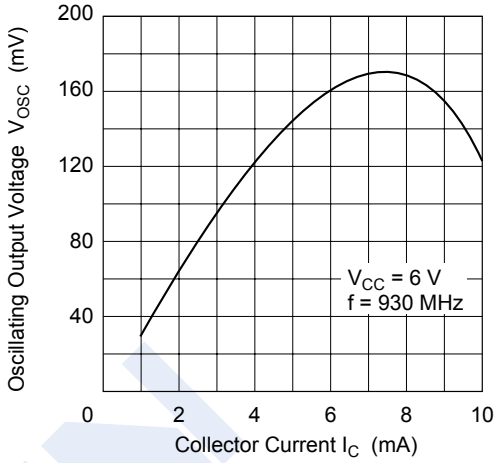
2SC2734

■ Typical Characterisitics

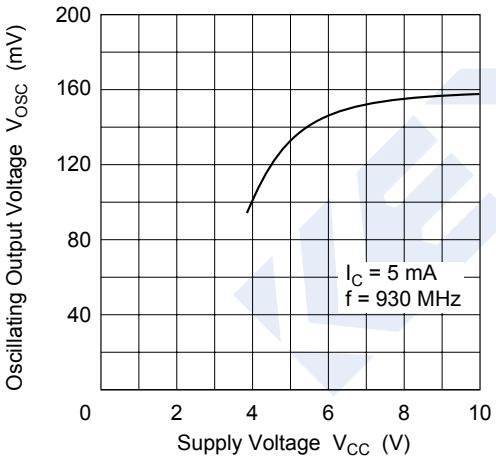
Noise Figure vs. Collector Current



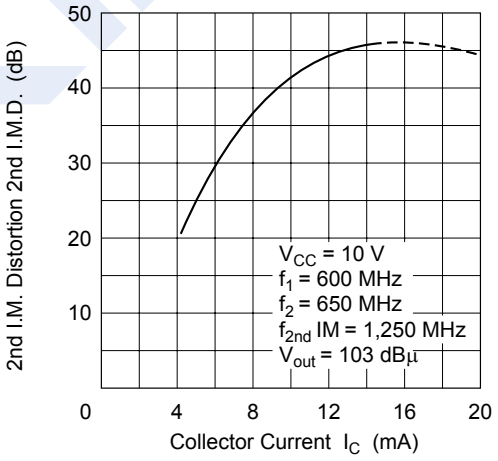
Oscillating Output Voltage vs. Collector Current



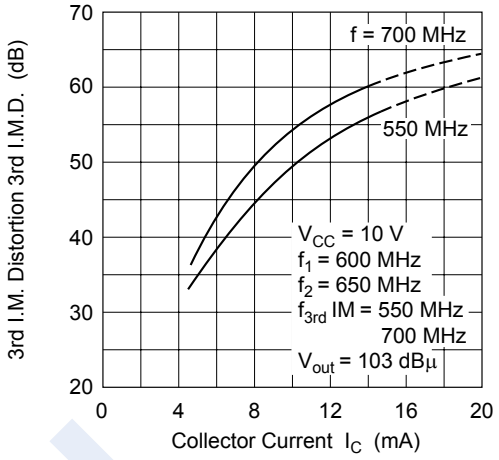
Oscillating Output Voltage vs. Supply Voltage



2nd I.M. Distortion vs. Collector Current



3rd I.M. Distortion vs. Collector Current



Power Gain vs. Frequency