

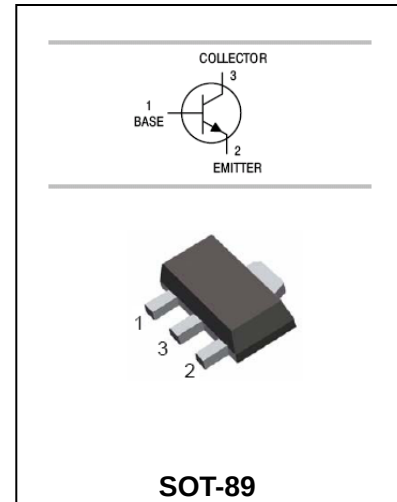
NPN Silicon Epitaxial Planar Transistor

GSS8040

FEATURES

- Low saturation voltage
- Excellent h_{FE} linearity and high h_{FE}
- Less cramping space required due to small and thin Package and reducing the trouble for attachment to a Radiator
- RoHS compliant with Halogen-free

HF



APPLICATIONS

- Power amplifier application

ORDERING INFORMATION

Type No.	Marking	Package Code
GSS8040-R	8040	SOT-89
GSS8040-Q	8040	SOT-89
GSS8040-P	8040	SOT-89
GSS8040-E	8040	SOT-89

MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Dissipation	500	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^{\circ}\text{C}$

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=30V, I_B=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=2V, I_C=20mA$	30	150		
		$V_{CE}=2V, I_C=1A$	60	160	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$		0.3	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2A, I_B=0.2A$		1.0	2.0	V
Transition frequency	f_T	$V_{CE}=5V, I_C=0.1A$		90		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		45		pF

CLASSIFICATION OF h_{FE}

Rank	R	Q	P	E
Range	60-120	100-200	160-320	200-400

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

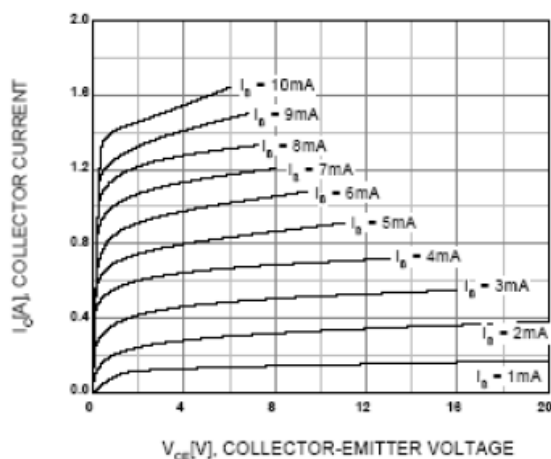


Figure 1. Static Characteristic

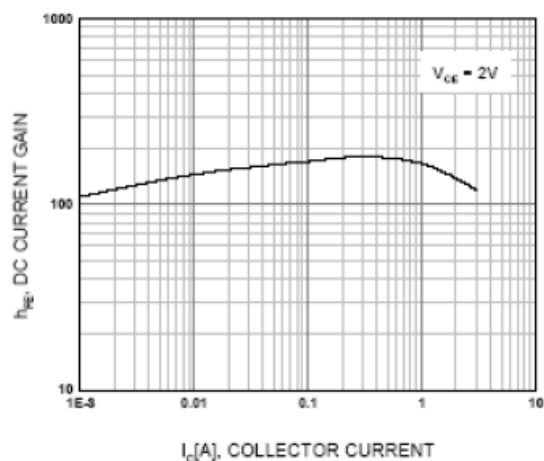


Figure 2. DC current Gain

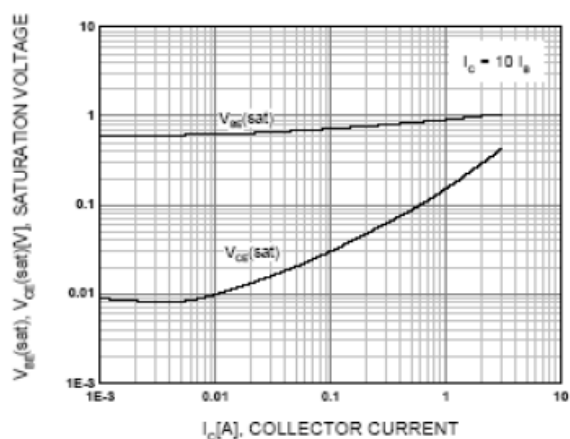


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

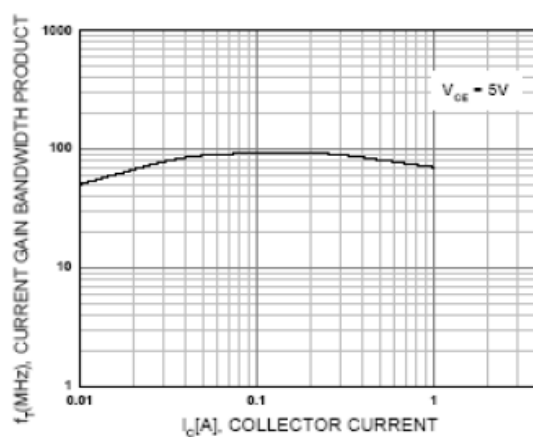


Figure 4. Current Gain Bandwidth Product

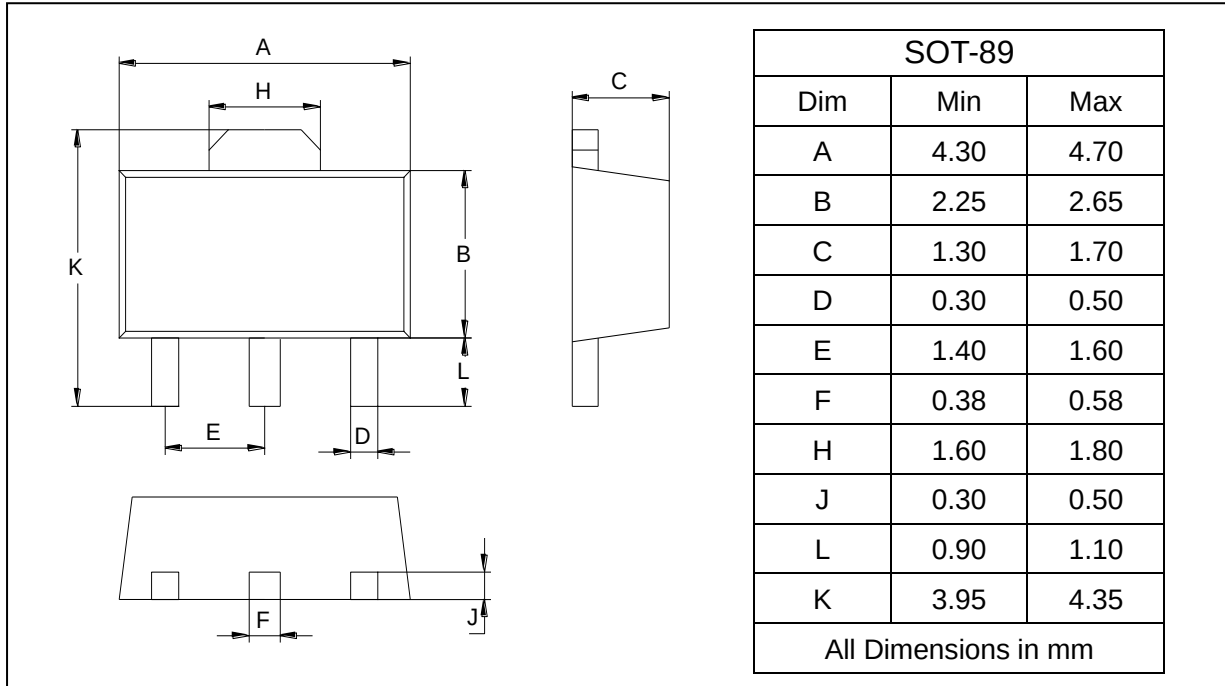
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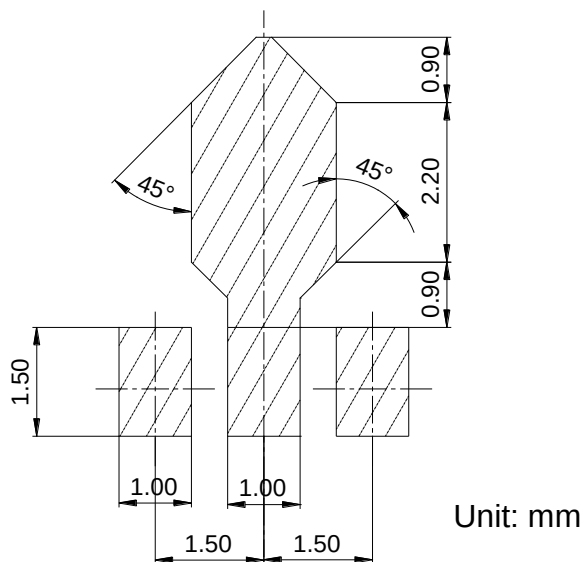
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
GSS8040	SOT-89	1000pcs / Tape & Reel