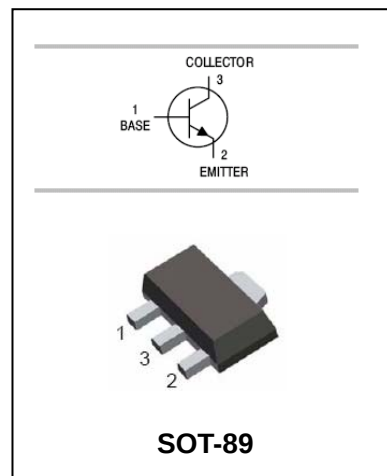


Power Transistor

2SC5824

FEATURES

- High speed switching.
- High current capacitance.
- Low saturation voltage typically.
- Strong discharge power for inductive load and capacitance load.
- Complements the 2SA2071.



ORDERING INFORMATION

Type No.	Marking	Package Code
2SC5824	UPQ/UPR	SOT-89

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Dissipation	500	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 to +150	°C



Power Transistor

2SC5824

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=2V, I_C=100mA$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=200mA$		200	500	mV
Transition frequency	f_T	$V_{CE}=10V, I_E=-100mA, f=10MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		20		pF

CLASSIFICATION OF h_{FE}

Rank	Q	R
Range	120-270	160-320
MARKING	UPQ	UPR

Power Transistor

2SC5824

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

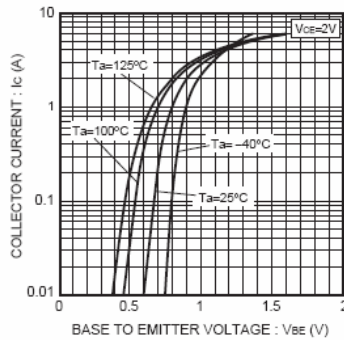


Fig.1 Ground emitter propagation characteristics

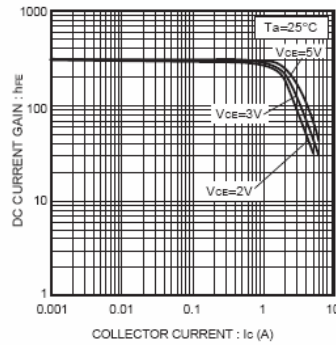


Fig.2 DC current gain vs. collector current

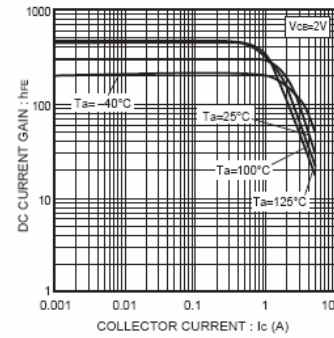


Fig.3 DC current gain vs. collector current

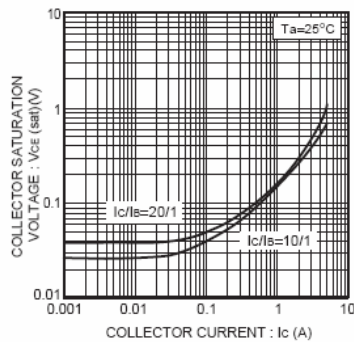


Fig.4 Collector-emitter saturation voltage vs. collector current

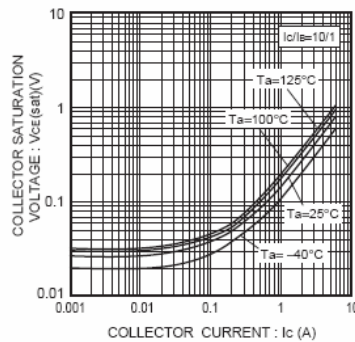


Fig.5 Collector-emitter saturation voltage vs. Collector Current

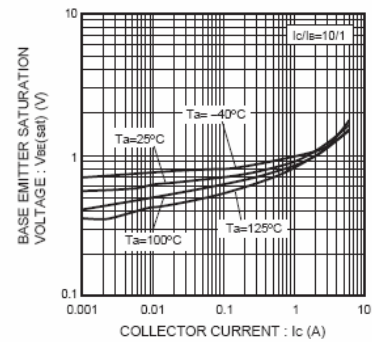


Fig.6 Base-emitter saturation voltage vs. collector current

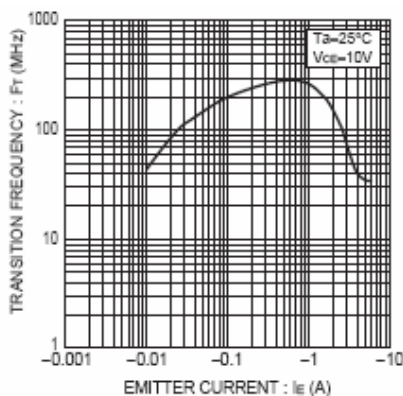


Fig.7 Transition frequency

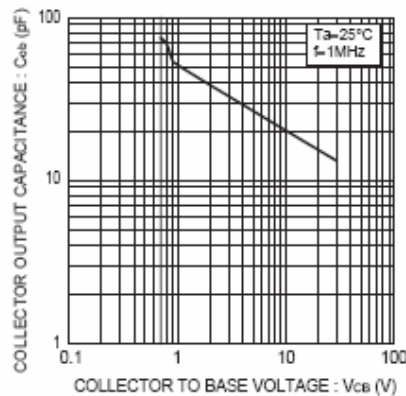


Fig.8 Collector output capacitance

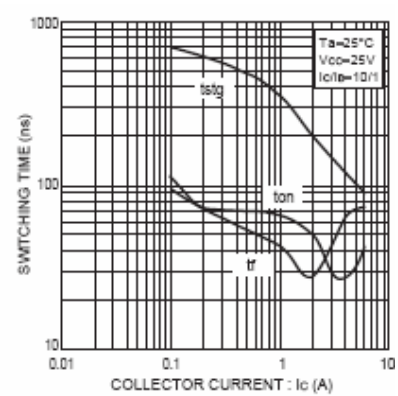


Fig.9 Switching Time

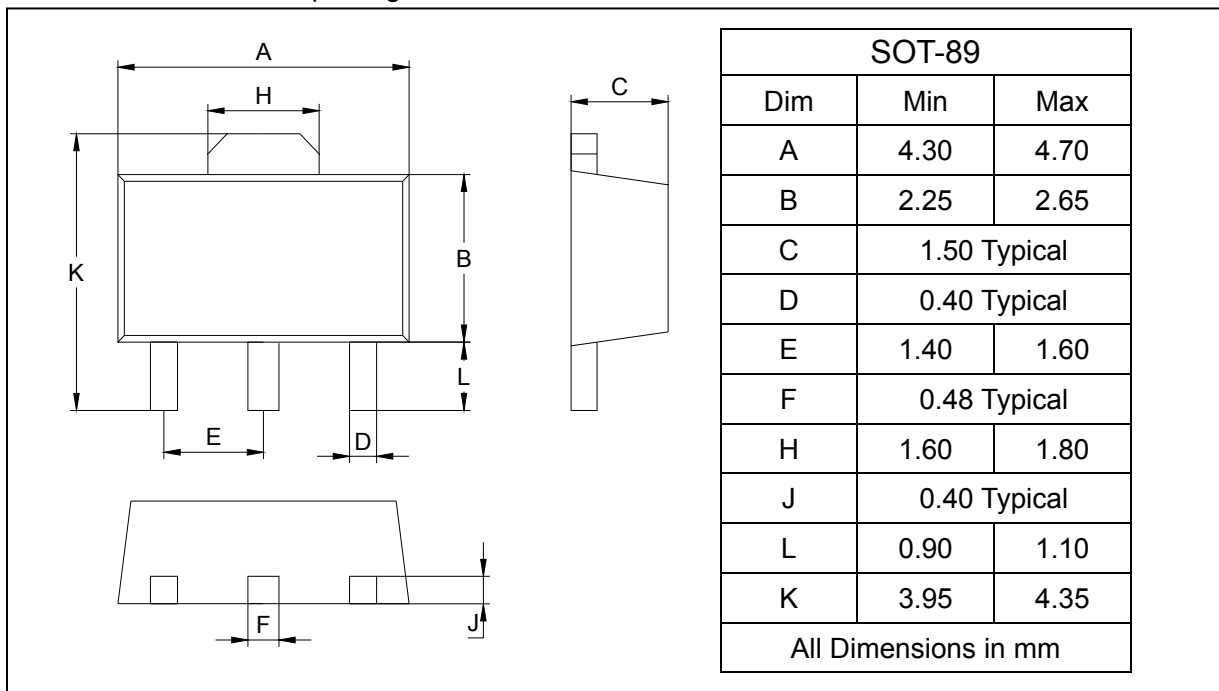
Power Transistor

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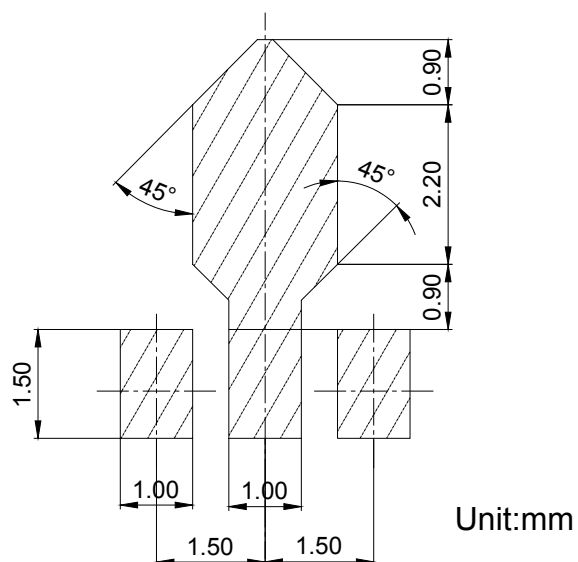
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SC5824	SOT-89	1000/Tape&Reel