



DONGGUAN NANJING ELECTRONICS LTD.,

PNP Silicon Epitaxial Planar Transistor

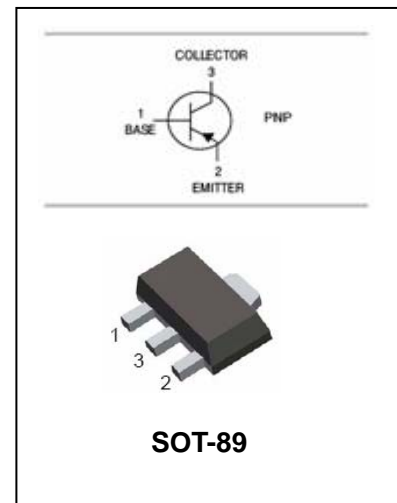
A92

FEATURES

- $P_{CM}=0.5W(T_{amb}=25^{\circ}C)$.
- High voltage.
- Complementary: A42.

APPLICATIONS

- Designed for high voltage driver application.



ORDERING INFORMATION

Type No.	Marking	Package Code
A92	A92	SOT-89

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-300	V
V_{CEO}	Collector-Emitter Voltage	-300	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.5	A
P_C	Collector Dissipation	500	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^{\circ}C$

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-300			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1.0mA, I_B = 0$	-300			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -200V, I_B = 0$			-0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -10V, I_C = -1mA$	60	300		
		$V_{CE} = -10V, I_C = -10mA$	100			
		$V_{CE} = -10V, I_C = -30mA$	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -20mA, I_B = -2mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -20mA, I_B = -2mA$			-0.9	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -10mA$ $f = 100MHz$		50		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -20V, I_E = 0, f = 1MHz$		6		pF

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

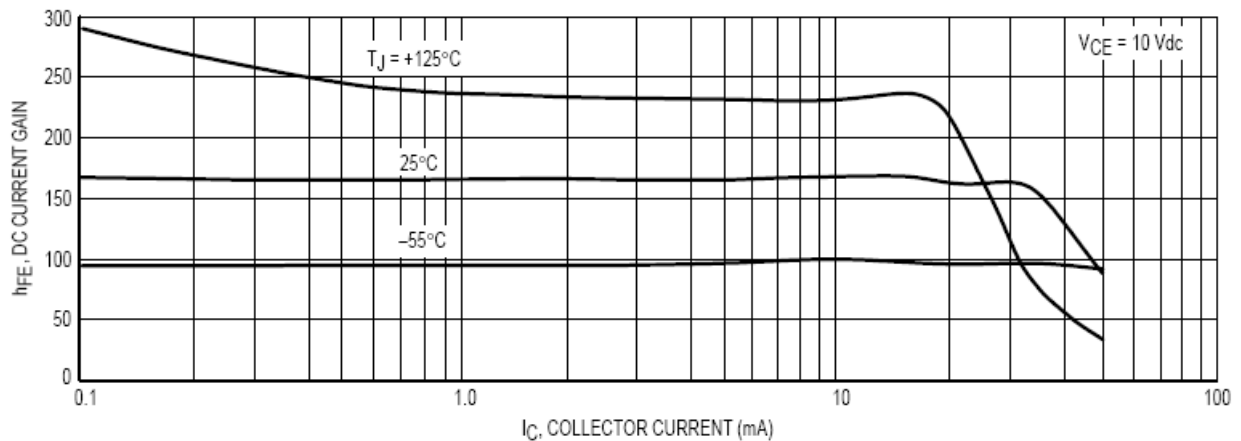


Figure 1. DC Current Gain

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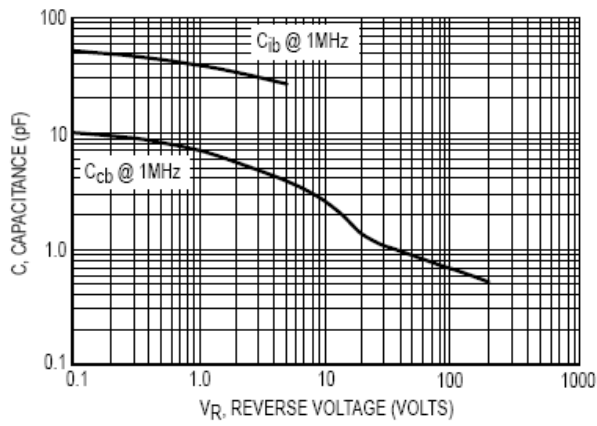


Figure 2. Capacitance

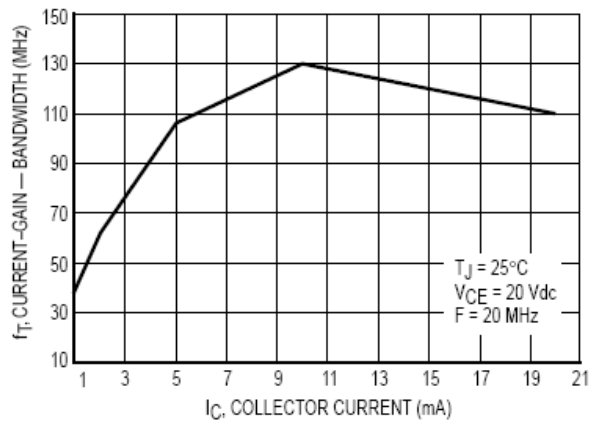


Figure 3. Current-Gain — Bandwidth

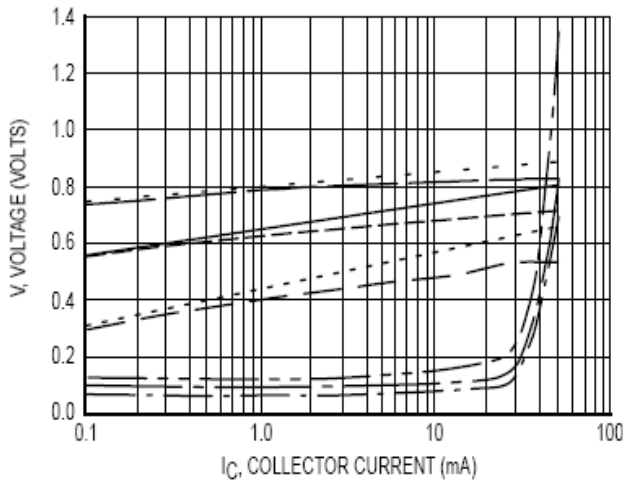


Figure 4. "ON" Voltages

- $V_{CE(sat)}$ @ 25°C , $I_C/I_B = 10$
- $V_{CE(sat)}$ @ 125°C , $I_C/I_B = 10$
- $V_{CE(sat)}$ @ -55°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ 25°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ 125°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ -55°C , $I_C/I_B = 10$
- $V_{BE(on)}$ @ 25°C , $V_{CE} = 10\text{ V}$
- $V_{BE(on)}$ @ 125°C , $V_{CE} = 10\text{ V}$
- $V_{BE(on)}$ @ -55°C , $V_{CE} = 10\text{ V}$

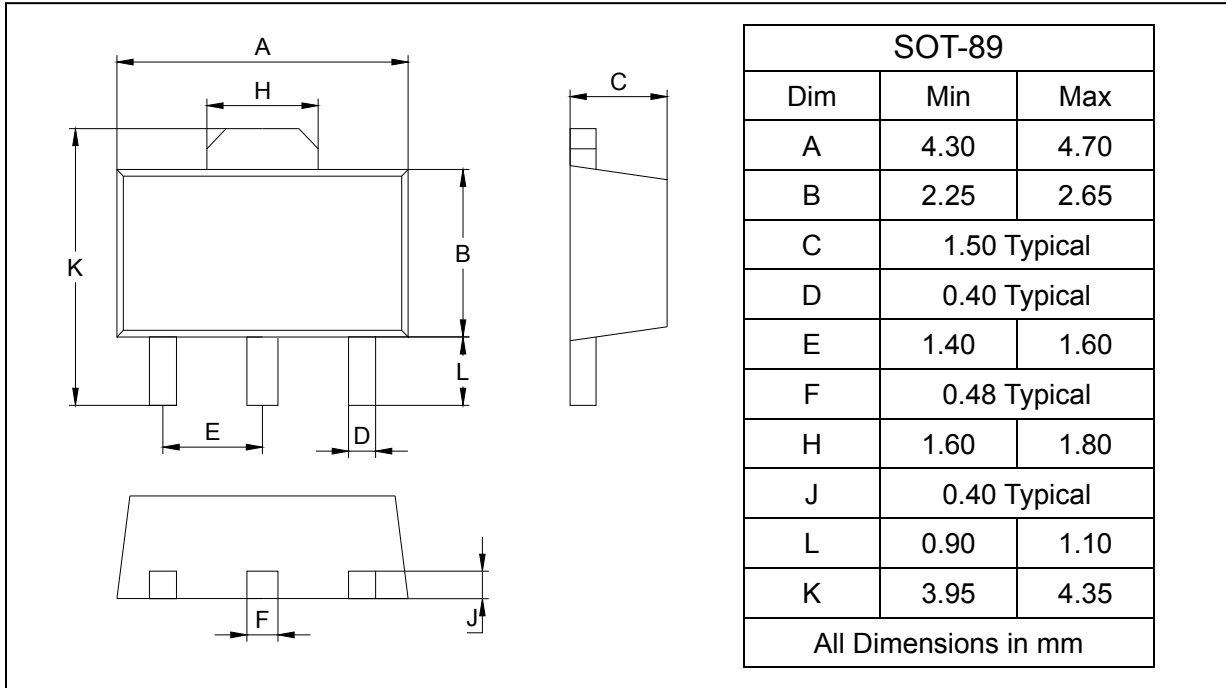
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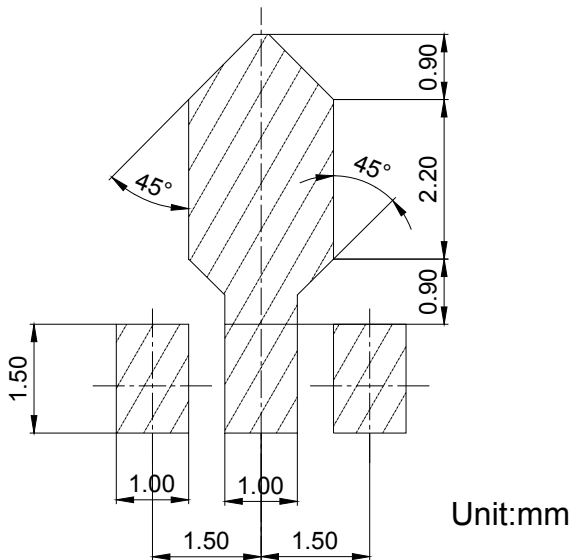
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
A92	SOT-89	1000/Tape&Reel