

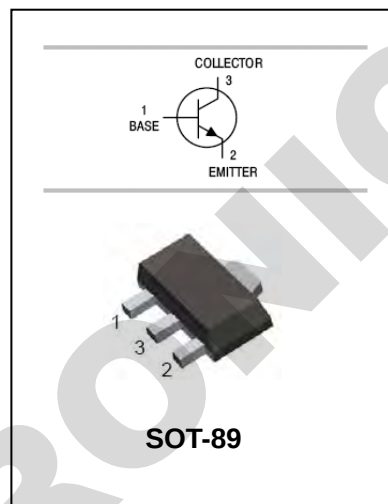
NPN Silicon Epitaxial Planar Transistor

FEATURES

- Collector-Emitter voltage: $V_{CEO}=300V$.
- Collector current up to 500mA.
- Complement to A92.
- Small flat package.
- Power dissipation: $P_d(\max)=500mW$.



Lead-free



APPLICATIONS

- High voltage transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
A42	A42	SOT-89

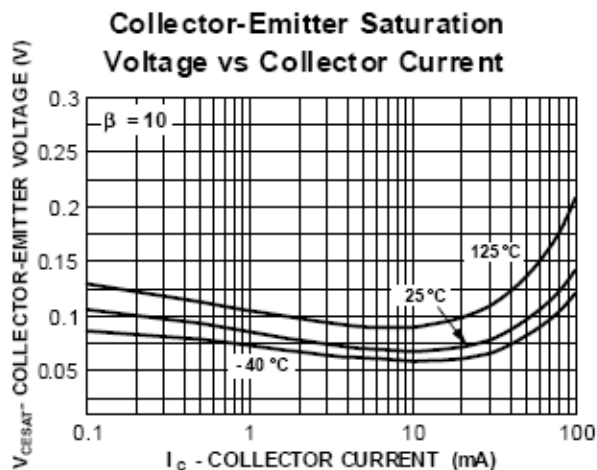
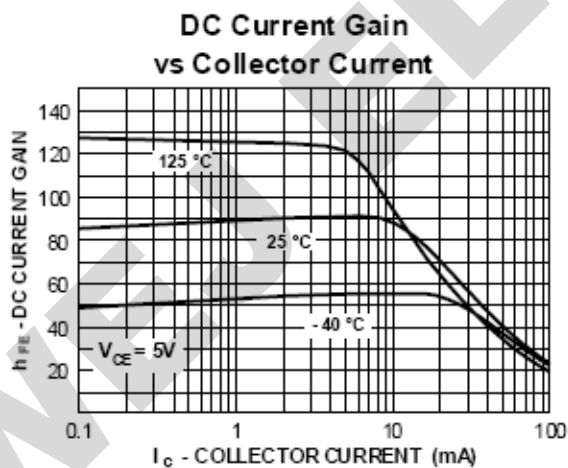
MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	310	V
V_{CEO}	collector-emitter voltage	305	V
V_{EBO}	emitter-base voltage	5	V
I_C	collector current (DC)	0.5	A
P_C	Collector dissipation	0.5	W
T_j, T_{stg}	junction and storage temperature	-55-150	$^{\circ}C$

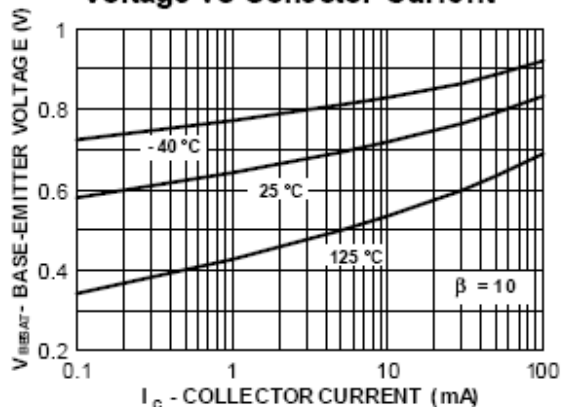
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	310	-	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1.0mA, I_B=0$	305	-	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5	-	V
I_{CBO}	collector cut-off current	$I_E = 0, V_{CB} = 200V$	-	0.25	μA
I_{EBO}	emitter cut-off current	$I_C = 0, V_{EB} = 5V$	-	0.1	μA
h_{FE}	DC current gain	$V_{CE} = 10V; I_C=1mA$ $V_{CE} = 10V; I_C = 10mA$ $V_{CE} = 10V; I_C = 30mA$	60 100 75	- 300 -	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 20mA; I_B = 2mA$	-	0.2	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 20mA; I_B = 2mA$	-	0.9	V
f_T	Transition frequency	$V_{CE}=20V, I_C=10mA, f=30MHz$	50		MHz

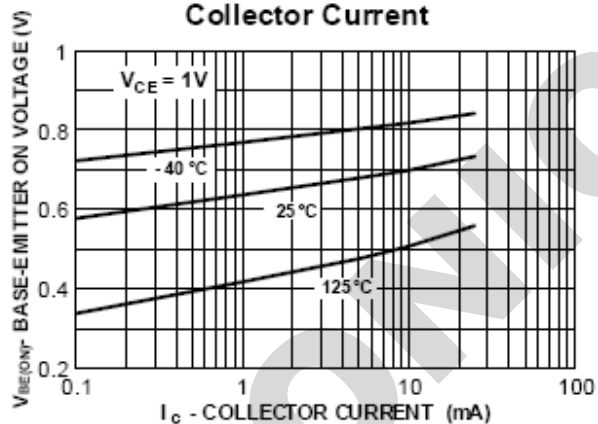
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



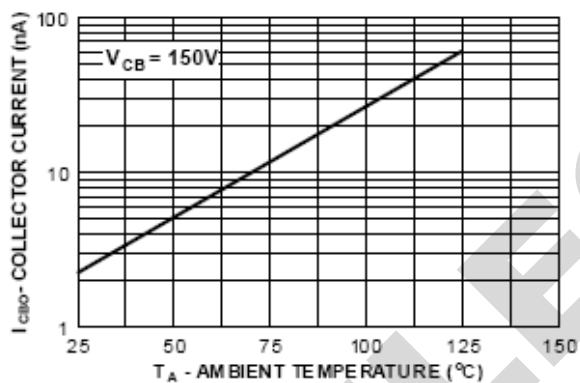
Base-Emitter Saturation Voltage vs Collector Current



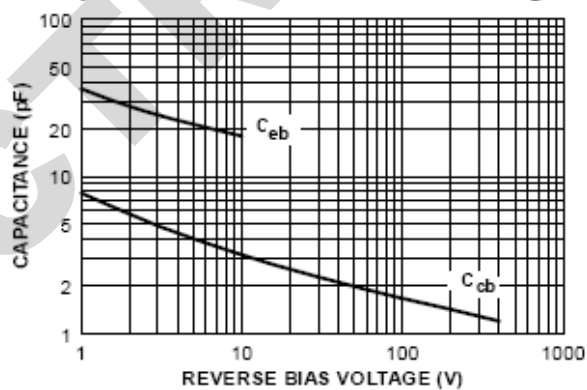
Base-Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs Ambient Temperature



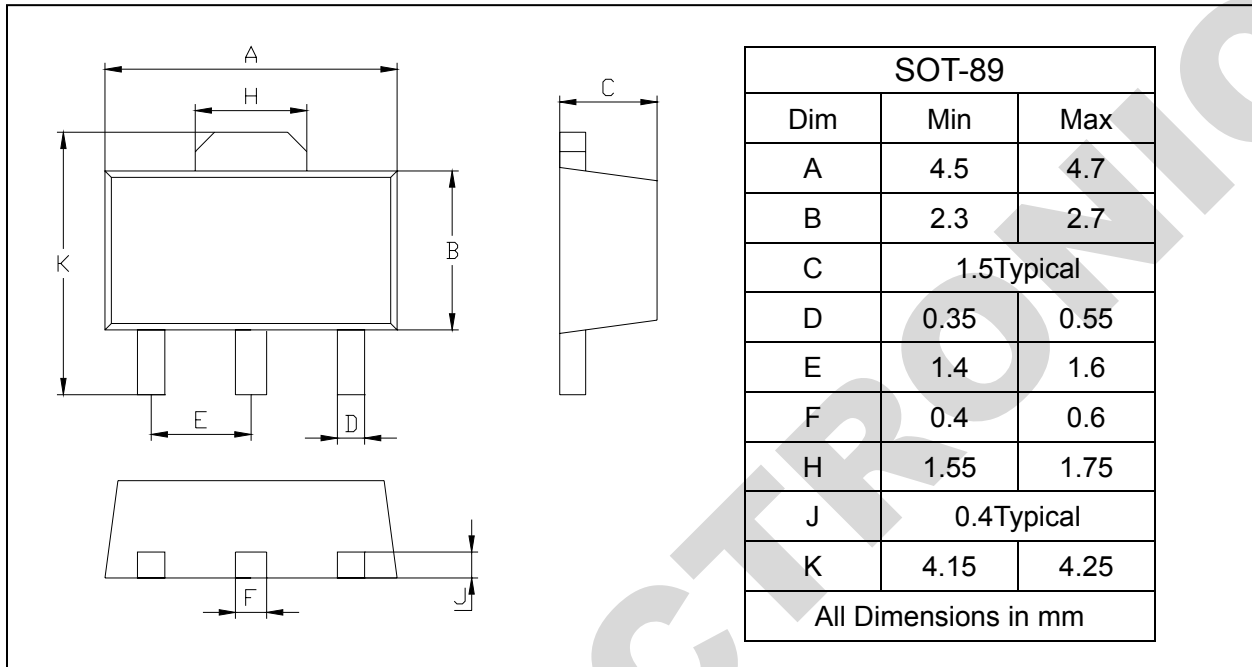
Collector-Base and Emitter-Base Capacitance vs Reverse Bias Voltage



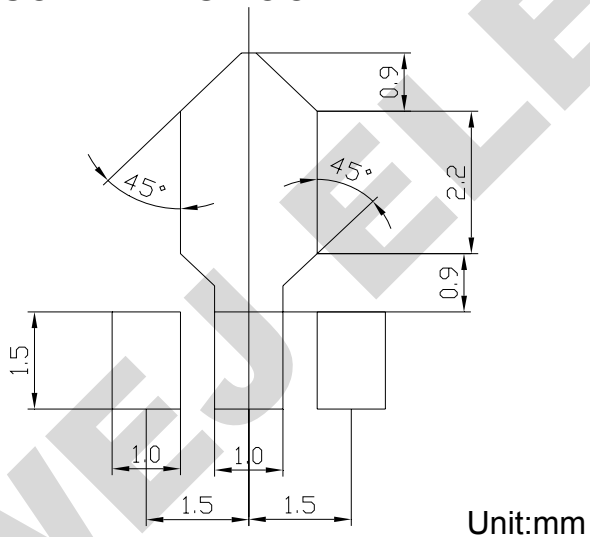
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
A42	SOT-89	1000/Tape&Reel