

## NPN Epitaxial Transistor

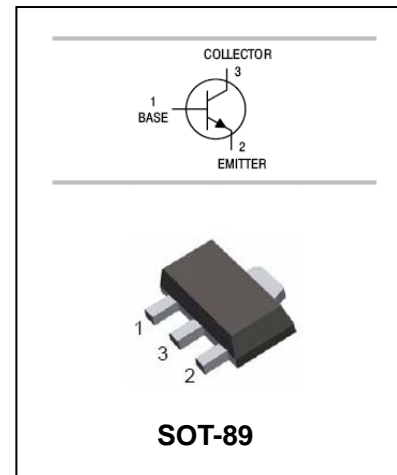
## 2SC1766

### FEATURES

- Small flat package.
- Low saturation voltage  $V_{CE(sat)} = -0.5V$
- High speed switching time
- $PC = 1.0$  to  $2.0W$
- High saturation current capability



Lead-free



### APPLICATIONS

- Power amplifier

### ORDERING INFORMATION

Type No.	Marking	Package Code
2SC1766	P1766/Q1766/Y1766	SOT-89

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	2	A
$I_{CM}$	Peak Collector Current	2	A
$I_{BM}$	Peak Base Current	0.4	A
$P_D$	Total Power Dissipation	1000	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	$^\circ C$

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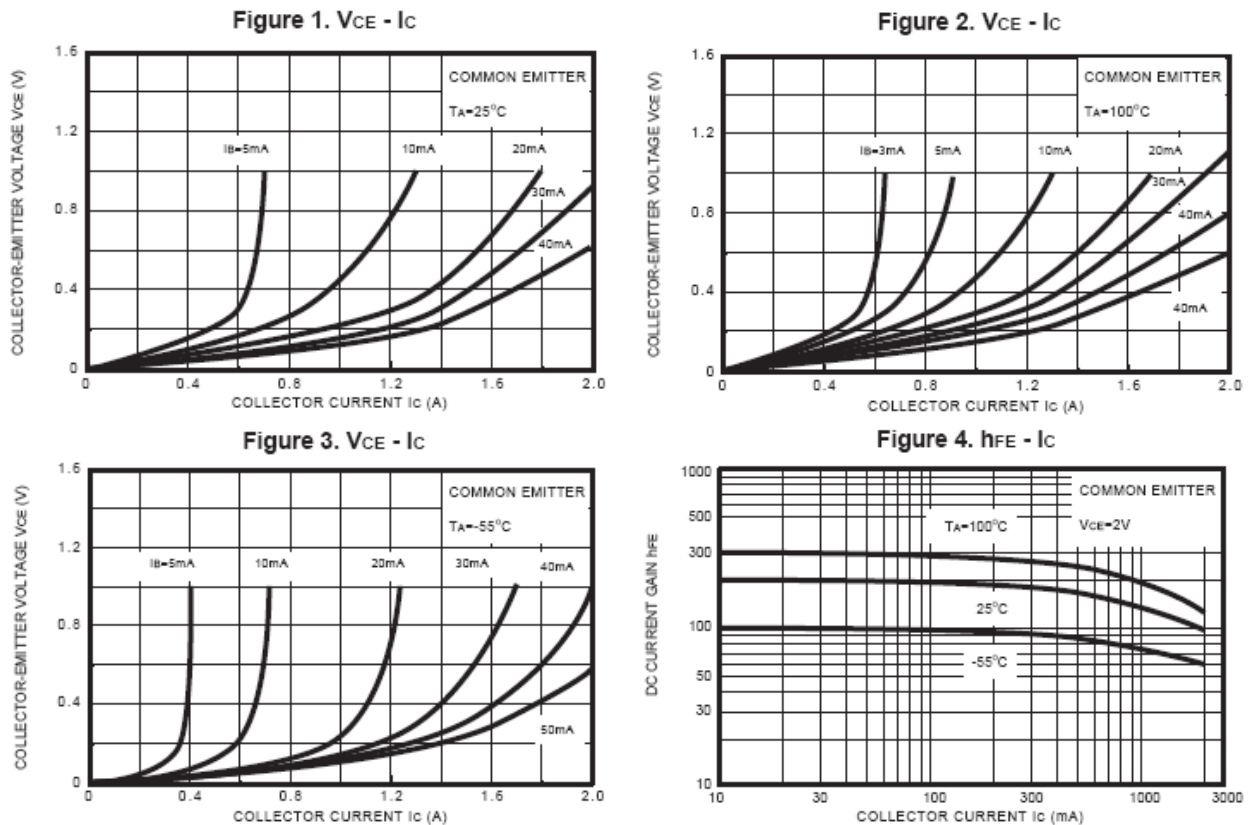
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	$I_{CBO}$	$V_{CB}=50V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=2V, I_C=500mA$	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1A, I_B=50mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=50mA$			1.2	mV
Transition frequency	$f_T$	$V_{CE}=2V, I_C=0.5A$ $f=100MHz$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		40		pF

### CLASSIFICATION OF $h_{FE}$

Rank	P	Q	Y
Range	82-180	120-270	180-390
MARKING	P1766	Q1766	Y1766

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



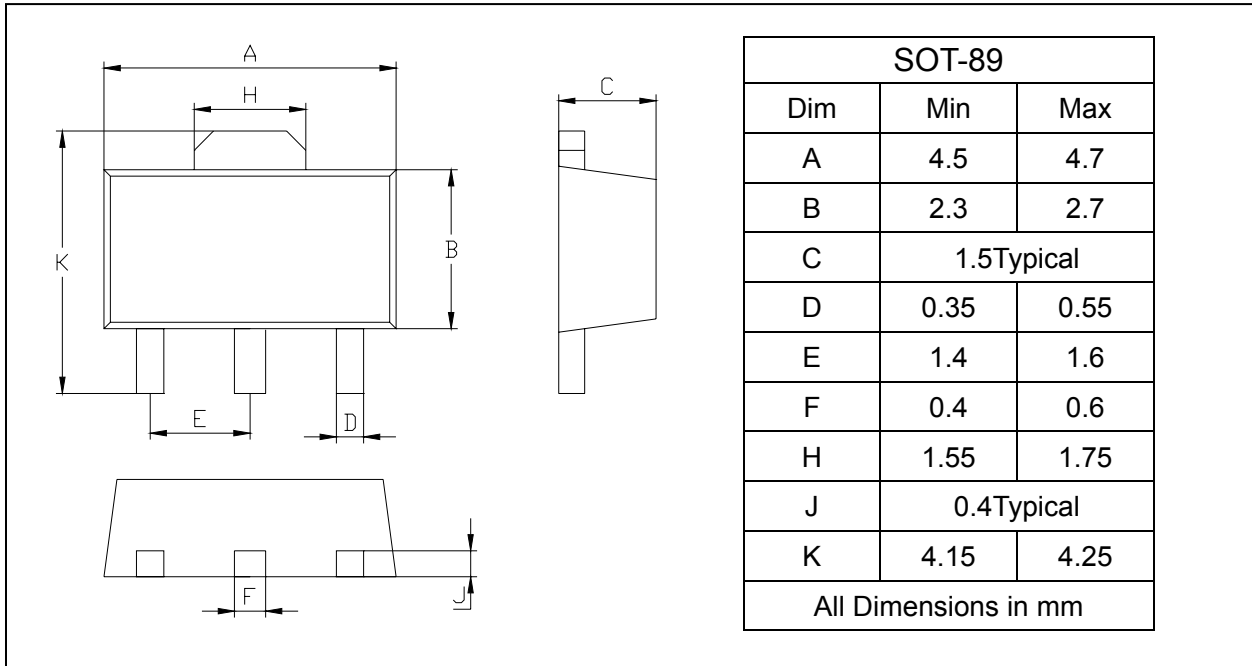
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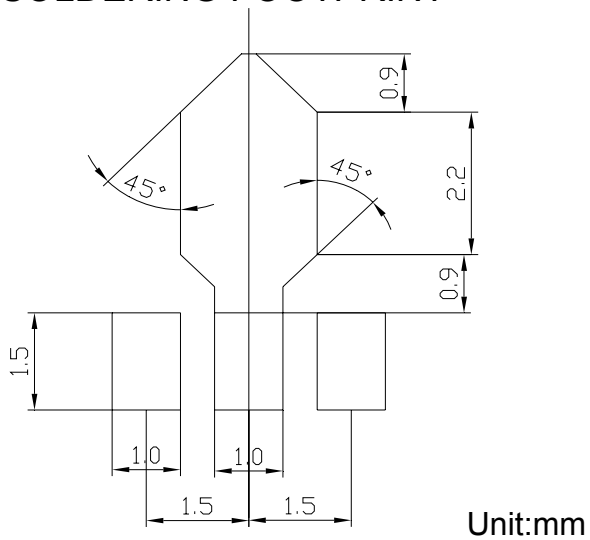
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
2SC1766	SOT-89	1000/Tape&Reel