



## DESCRIPTION

The 2SD1766 is available in SOT-89 package

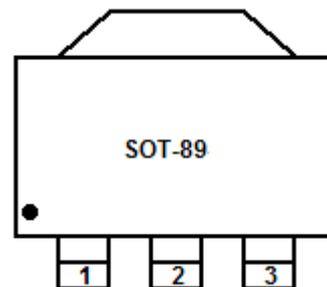
## FEATURES

- Low  $V_{CE(sat)}$ ,  $V_{CE(sat)} = 0.5V$  (typical)  
( $I_C = 2A$ ,  $I_B = 0.2A$ ).
- Available in SOT-89 package

## ORDERING INFORMATION

Package Type	Part Number
SOT-89	2SD1766P
	2SD1766Q
	2SD1766R
Note	SPQ: 1,000pcs/Reel
AiT provides all RoHS Compliant Products	

## PIN DESCRIPTION



1. BASE
2. COLLECTOR
3. EMITTER



## ABSOLUTE MAXIMUM RATINGS

$T_A=25^\circ\text{C}$

$V_{CBO}$ , Collector-Base Voltage	40V
$V_{CEO}$ , Collector-Emitter Voltage	32V
$V_{EBO}$ , Emitter-Base Voltage	5V
$I_C$ , Collector Current	2A
$I_C(\text{Pulse})^{\text{NOTE1}}$ , Collector Current	2.5A
$P_C$ , Collector Power Dissipation	0.5W
$P_C^{\text{NOTE2}}$ , Collector Power Dissipation	2W
$T_J$ , Junction Temperature	150°C
$T_{STG}$ , Storage Temperature	-55°C ~150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1:  $P_w=20\text{ms}$ .

NOTE2: 40X40X 0.7mm Ceramic board.

## ELECTRICAL CHARACTERISTICS

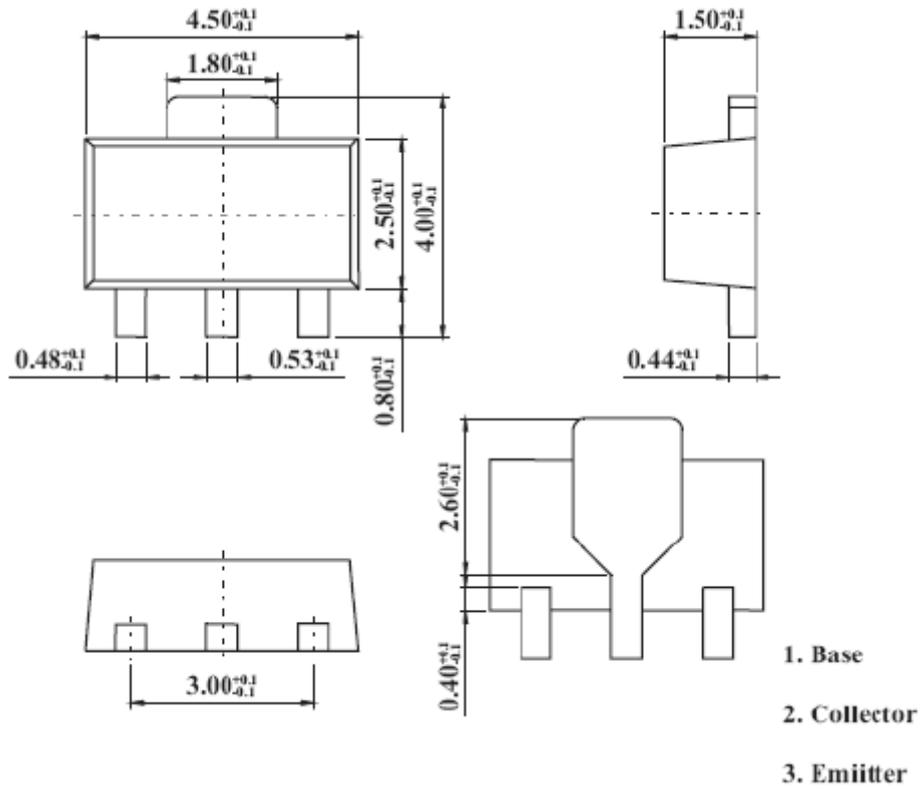
$T_A=25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Collector-Base Voltage	$BV_{CBO}$	$I_C=50\mu\text{A}$	40	-	-	V	
Collector-Emitter Voltage	$BV_{CEO}$	$I_C=1\text{mA}$	32	-	-	V	
Emitter-Base Voltage	$BV_{EBO}$	$I_E=50\mu\text{A}$	5	-	-	V	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20\text{V}$	-	-	1	$\mu\text{A}$	
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}$	-	-	1	$\mu\text{A}$	
DC Current Gain	$h_{FE}$	$V_{CE}=3\text{V}, I_C=0.5\text{A}$	P	82	-	180	
			Q	120	-	270	
			R	180	-	390	
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C=2\text{A}, I_B=0.2\text{A}$	-	0.5	0.8	V	
Transition Frequency	$f_T$	$V_{CE}=5\text{V}, I_E=-500\text{mA},$ $f=100\text{MHz}$	-	100	-	MHz	
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0\text{A},$ $f=1\text{MHz}$	-	30	-	pF	



## PACKAGE INFORMATION

Dimension in SOT-89 (Unit: mm)





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