

# GSTS772

## PNP Epitaxial Planar Transistors


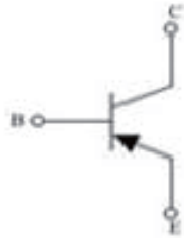
### Product Description

This device is designed as a general purpose amplifier and switch.

### Features

- Collector-Emitter Voltage : -30V
- Collector Current : -3.0A
- Lead(Pb)-Free

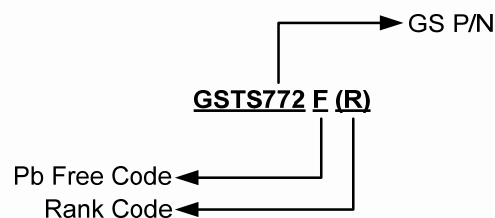
### Packages & Pin Assignments

TO-92	
	
	
Pin	Description
1	Emitter
2	Collector
3	Base

### Marking Information

P/N	Package	Rank	Part Marking
GSTS772F	TO-92	(R) / (O) / (Y) / (GR)	B772

### Ordering Information



Part Number	Package	Quantity
GSTS772F(R or O or Y or GR)	TO-92	1000 PCS

## Absolute Maximum Ratings

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

Symbol	Conditions	Typical	Unit
$V_{CEO}$	Collector-Emitter Voltage	-30	V
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{EBO}$	Emitter-Base Voltage	-5.0	V
$I_{C(DC)}$	Collector Current (DC)	-3.0	A
$I_C(\text{Pulse})$	Collector Current (Pulse)	-7.0	A
$I_B(\text{Pulse})$	Base Current	-0.6	A
$P_D$	Total Device Dissipation $T_A=25^\circ\text{C}$	0.625	W
$T_J$	Junction Temperature Range	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

## Electrical Characteristics

( $T_A=25^\circ\text{C}$  unless otherwise noted)

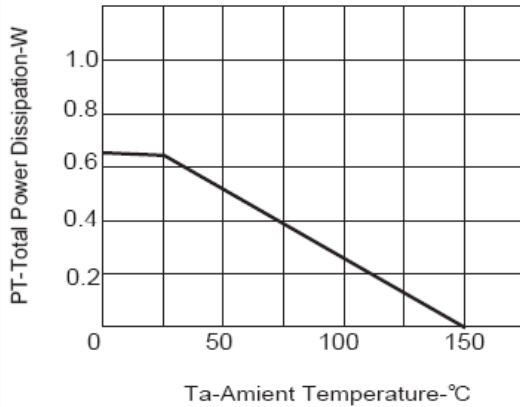
Symbol	Conditions	Min	TYP	Max	Unit
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=-10\text{mA}$ , $I_B=0\text{mA}$ )	-30	-	-	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=-100\mu\text{A}$ , $I_E=0\text{mA}$ )	-40	-	-	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=-100\mu\text{A}$ , $I_C=0\text{mA}$ )	-5.0	-	-	V
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=-30\text{V}$ , $I_B=0\text{mA}$ )	-	-	-1.0	$\mu\text{A}$
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=-40\text{V}$ , $I_E=0\text{mA}$ )	-	-	-1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=-6.0\text{V}$ , $I_C=0\text{mA}$ )	-	-	-1.0	$\mu\text{A}$
$h_{FE(1)}$	DC Current Gain ( $I_C=-1.0\text{A}$ , $V_{CE}=-2.0\text{V}$ )	60	-	400	-
$h_{FE(2)}$	DC Current Gain ( $I_C=-100\text{mA}$ , $V_{CE}=-2.0\text{V}$ )	32	-	-	-
$V_{CE(\text{sat})}$	Collector-Emitter Saturation Voltage ( $I_C=-2.0\text{A}$ , $I_B=-0.2\text{A}$ )	-	-	-0.5	V
$V_{BE(\text{sat})}$	Base-Emitter Saturation Voltage ( $I_C=-2.0\text{A}$ , $I_B=-0.2\text{A}$ )	-	-	-2.0	V
$f_T$	Current-Gain-Bandwidth Product ( $I_C=-0.1\text{A}$ , $V_{CE}=-5.0\text{V}$ , $f=10\text{MHz}$ )	-	80	-	MHz

## Classification of $h_{FE(1)}$

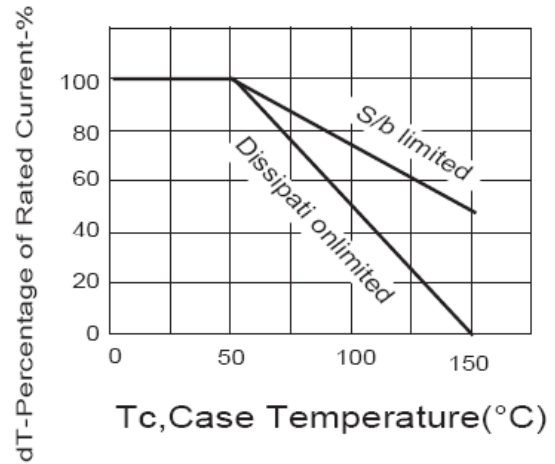
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

## Typical Performance Characteristics

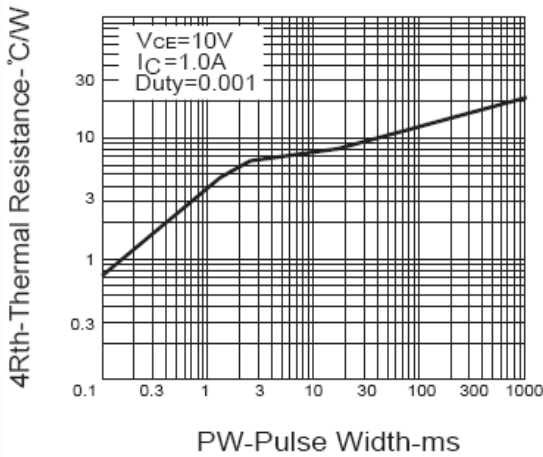
F1. Total Power Dissipation VS. Ambient Temperature



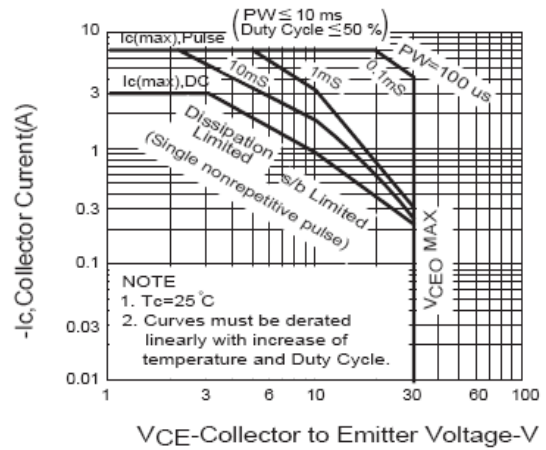
F.2 Derating Curve for All Types



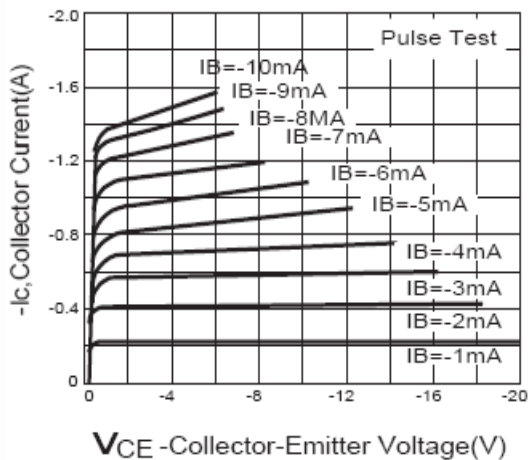
F3. Thermal Resistance VS. Pulse Width



F4. Safe Operating Areas

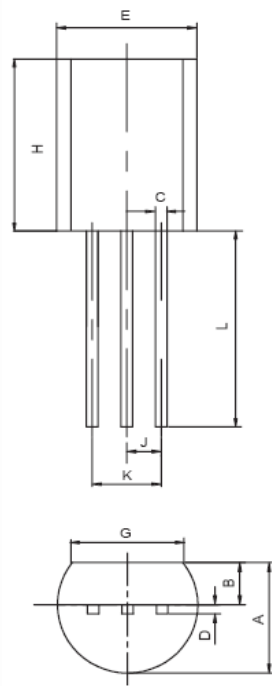


F5. Collector Current VS. Collector To Emitter Voltage



## Package Dimension

### TO-92







Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	3.30	3.70	0.13	0.15
<b>B</b>	1.10	1.40	0.04	0.06
<b>C</b>	0.38	0.55	0.015	0.022
<b>D</b>	0.36	0.51	0.014	0.020
<b>E</b>	4.40	4.70	0.173	0.185
<b>G</b>	3.43	-	0.135	-
<b>H</b>	4.30	4.70	0.169	0.185
<b>J</b>	1.270(TYP)		0.050(TYP)	
<b>K</b>	2.44	2.64	0.096	0.104
<b>L</b>	14.10	14.50	0.555	0.571





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