

# 深圳市晶泰源电子有限公司

## FM591 TRANSISTOR (PNP)

### FEATURES

Low equivalent on-resistance

Marking :591

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-1	A
$P_C$	Collector Power Dissipation	500	mW
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}\text{C}$

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^1$	$I_C=-10\text{mA}, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-4\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}, I_C=-1\text{mA}$	100			
	$h_{FE(2)}^1$	$V_{CE}=-5\text{V}, I_C=-500\text{mA}$	100		300	
	$h_{FE(3)}^1$	$V_{CE}=-5\text{V}, I_C=-1\text{A}$	80			
	$h_{FE(4)}^1$	$V_{CE}=-5\text{V}, I_C=-2\text{A}$	15			
Collector-emitter saturation voltage	$V_{CE(sat)1}^1$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.3	V
	$V_{CE(sat)2}^1$	$I_C=-1\text{A}, I_B=-100\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}^1$	$I_C=-1\text{A}, I_B=-100\text{mA}$			-1.2	V
Base-emitter voltage	$V_{BE}^1$	$V_{CE}=-5\text{V}, I_C=-1\text{A}$			-1	V
Transition frequency	$f_T$	$V_{CE}=-10\text{V}, I_C=-50\text{mA}, f=100\text{MHz}$	150			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, f=1\text{MHz}$			10	pF

<sup>1</sup>Measured under pulsed conditions, Pulse width=300 $\mu\text{s}$ , Duty cycle $\leq$ 2%.