

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Darling Connection Provides High DC Current Gain (h_{FE})
- Large Collector Power Dissipation
- Low Frequency and Power Amplifier

MARKING

2SD2396

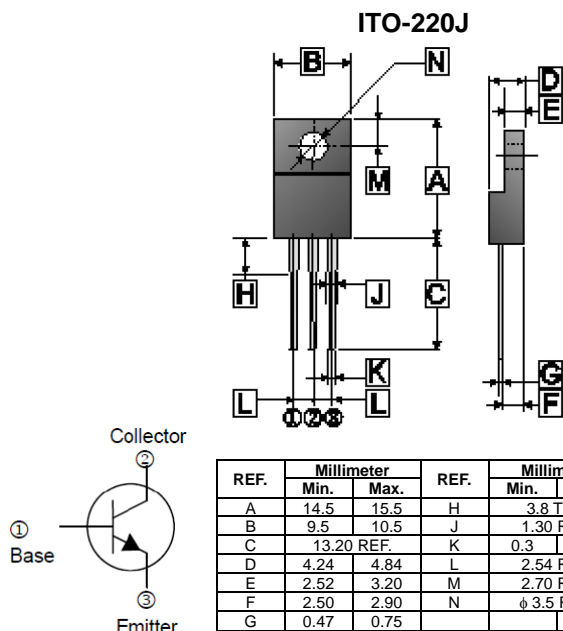
CLASSIFICATION OF h_{FE}

Product-Rank	2SD2396-J
Range	600~1200

ORDER INFORMATION

Part Number	Type
2SD2396-□	Lead (Pb)-free
2SD2396-□-C	Lead (Pb)-free and Halogen-free

*□=Rank



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

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	3	A
Collector Power Dissipation	P_C	2	W
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{STG}	-55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80	-	-	V	$I_C=0.05\text{mA}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=0.05\text{mA}, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	100	μA	$V_{CB}=80\text{V}, I_E=0$
Emitter Cut-off Current	I_{EBO}	-	-	100	μA	$V_{EB}=6\text{V}, I_C=0$
DC Current Gain ¹	h_{FE}	600	-	1200		$V_{CE}=4\text{V}, I_C=0.5\text{A}$
Collector-Emitter Saturation Voltage ¹	$V_{CE(sat)}$	-	-	0.8	V	$I_C=2\text{A}, I_B=50\text{mA}$
Base-Emitter Voltage	$V_{BE(sat)}$	-	-	1.5	V	$I_C=2\text{A}, I_B=50\text{mA}$
Transition Frequency	f_T	-	40	-	MHz	$V_{CE}=5\text{V}, I_C=0.2\text{A}$ $f=10\text{MHz}$
Collector Output Capacitance	C_{ob}	-	55	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

Note:

1. Pulse test: Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

CHARACTERISTIC CURVES

