

TRANSISTOR (NPN)	SOT-23 Plastic-Encapsulate Transistors																																				
1.BASE 2.EMITTER 3.COLLECTOR COLLECTOR 3 1 BASE 2 EMITTER Marking :3EM	Features ※ AM/FM Amplifier,Local Oscillator of FM/VHF Tuner ※ High Current Gain Bandwidth Product																																				
MAXIMUM RATINGS (Ta=25℃ unless otherwise noted) <table><tr><th>Parameter</th><th>Symbol</th><th>Value</th><th>Unit</th></tr><tr><td>Collector-Base Voltage</td><td>V_{CB0}</td><td>30</td><td>V</td></tr><tr><td>Collector-Emitter Voltage</td><td>V_{CE0}</td><td>15</td><td>V</td></tr><tr><td>Emitter-Base Voltage</td><td>V_{EB0}</td><td>5</td><td>V</td></tr><tr><td>Collector Current</td><td>I_C</td><td>50</td><td>mA</td></tr><tr><td>Collector Power Dissipation</td><td>P_C</td><td>200</td><td>mW</td></tr><tr><td>Thermal Resistance From Junction To Ambient</td><td>R_{θJA}</td><td>625</td><td>℃/W</td></tr><tr><td>Junction Temperature</td><td>T_j</td><td>150</td><td>℃</td></tr><tr><td>Storage Temperature</td><td>T_{stg}</td><td>-55~+150</td><td>℃</td></tr></table>		Parameter	Symbol	Value	Unit	Collector-Base Voltage	V _{CB0}	30	V	Collector-Emitter Voltage	V _{CE0}	15	V	Emitter-Base Voltage	V _{EB0}	5	V	Collector Current	I _C	50	mA	Collector Power Dissipation	P _C	200	mW	Thermal Resistance From Junction To Ambient	R _{θJA}	625	℃/W	Junction Temperature	T _j	150	℃	Storage Temperature	T _{stg}	-55~+150	℃
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ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 100 μ A, IE=0	30			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	15			V
Emitter-base breakdown voltage	V(BR)EBO	IE= 100 μ A, IC=0	5			V
Collector cut-off current	ICBO	VCB= 30V, IE=0			0.05	μ A
Collector cut-off current	ICEO	VCB= 12V, IE=0			0.1	μ A
Emitter cut-off current	IEBO	VEB= 3V, IC=0			0.1	μ A
DC current gain	hFE	VCE=5V, IC= 1mA	70		190	
Collector-emitter saturation voltage	VCE(sat)	IC= 10 mA, IB= 1mA			0.5	V
Base-emitter saturation voltage	VBE(sat)	IC= 10 mA, IB= 1mA			1.4	V
Transition frequency	fT	VCE=5V, IC= 5mA f=400MHz		800		MHz

CLASSIFICATION OF hFI

Rank	L	H
Range	70-105	105-190

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

