

SOT-363 Plastic-Encapsulate Transistors

UMZ2N DUAL TRANSISTOR (PNP+NPN)

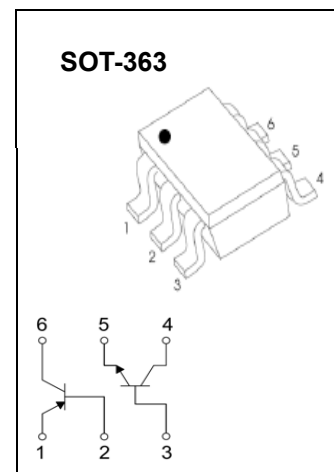
FEATURES

- Both 2SA1037 and 2SC2412 chip in a package
- Transistor elements are independent, eliminating interference
- Mounting cost and area be cut in half

MARKING:Z2

Absolute maximum ratings (Ta=25°C)

Symbol	Parameter	Limits		Units
		Tr1	Tr2	
V _{CBO}	Collector-Base Voltage	-60	60	V
V _{CEO}	Collector-Emitter Voltage	-50	50	V
V _{EBO}	Emitter-Base Voltage	-6	7	V
I _C	Collector Current	-150	150	mA
P _C	Collector Power Dissipation	150		mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150		°C



ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Tr1 (PNP)

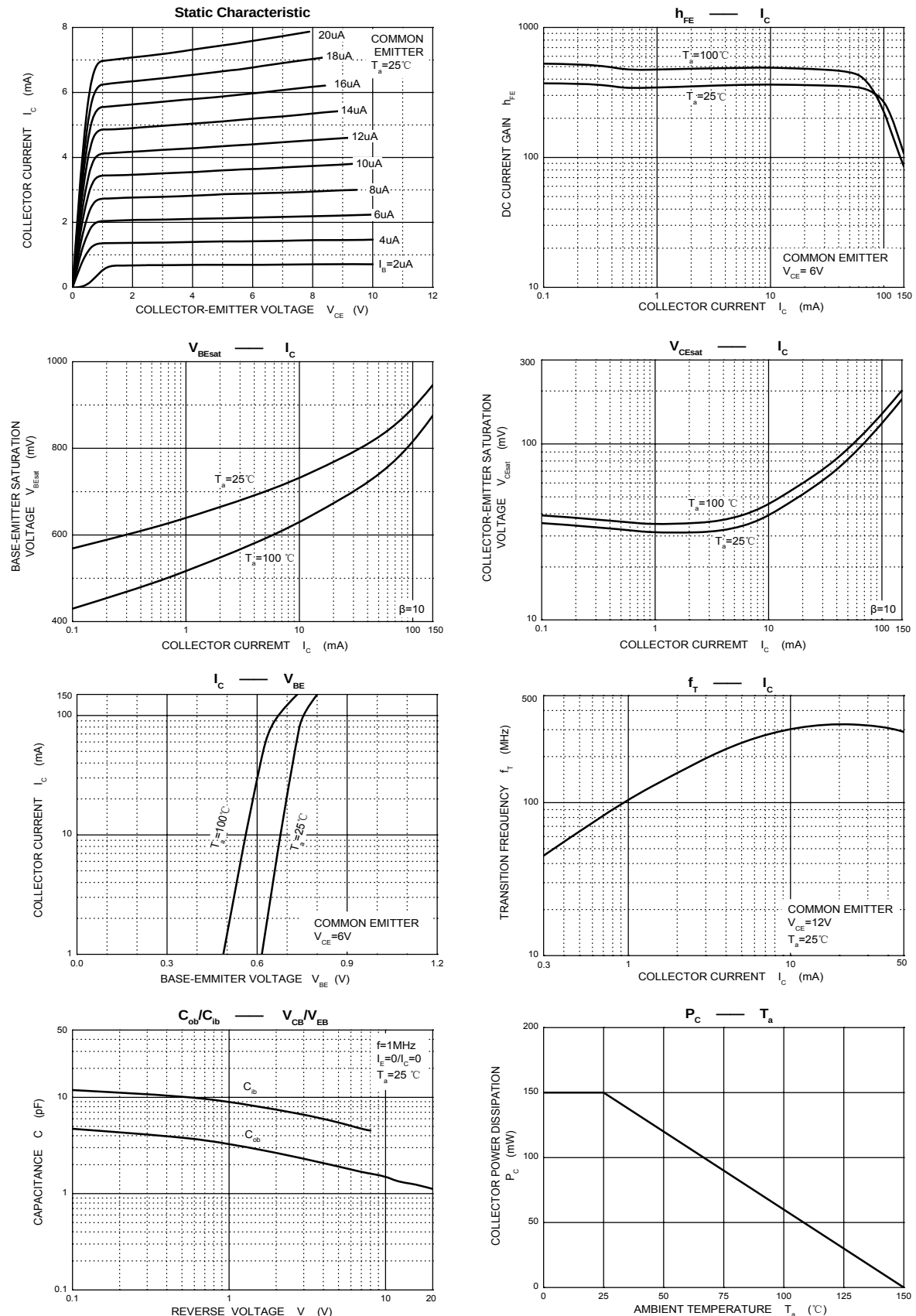
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-6			V
Collector cut-off current	I _{CBO}	V _{CB} =-60V, I _E =0			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-6V, I _C =0			-0.1	μA
DC current gain	h _{FE}	V _{CE} =-6V, I _C =-1mA	120		560	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-50mA, I _B =-5mA			-0.5	V
Transition frequency	f _T	V _{CE} =-12V, I _E =2mA, f=100MHz		140		MHz
Collector output capacitance	C _{ob}	V _{CB} =-12V, I _E =0, f=1MHz			5	pF

Tr2 (NPN)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=7V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6V, I_C=1mA$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$			0.4	V
Transition frequency	f_T	$V_{CE}=12V, I_E=-2mA, f=100MHz$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB}=12V, I_E=0, f=1MHz$			3.5	pF

Typical Characteristics

UMZ2N (NPN)



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UMZ2N (PNP)

