PNP Medium Power Transistor (Switching)

UMT4403 / SST4403 / MMST4403 / 2N4403

●Features

1) BV_{CEO} < −40V (I_C = 1mA)
2) Complements the UMT4401 / SST4401 / MMST4401 / 2N4401.

●Package, marking, and packaging specifications

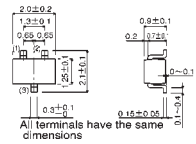
Pat No.	UMT4403	SST4403	MMST4403	2N4403
Pakaging type	UMT3	SST3	SMT3	TO-92
Marking	R2T	R2T	R2T	—
Code	T106	T116	T146	T93
Basic ordering unit (pieces)	3000	3000	3000	3000

●Absolute maximum ratings (Ta=25℃)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	−40	V
Collector-emitter voltage		V_{CEO}	−40	V
Emitter-base voltage		V_{EBO}	−6	V
Collector current		I_C	−0.6	A
Collector power dissipation	UMT4403 SST4403 MMST4403	P_C	0.2	W
	2N4403		0.625	
Junction temperature		Tj	150	℃
Storage temperature		Tstg	−55~+150	℃

●External dimensions (Units : mm)

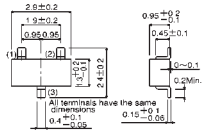
UMT4403



ROHM : UMT3
EIAJ : SC-70

(1) Emitter
(2) Base
(3) Collector

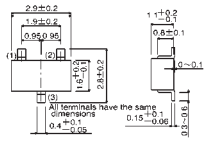
SST4403



ROHM : SST3

(1) Emitter
(2) Base
(3) Collector

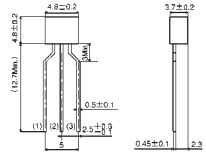
MMST4403



ROHM : SMT3
EIAJ : SC-59

(1) Emitter
(2) Base
(3) Collector

2N4403



ROHM : TO-92
EIAJ : SC-43

(1) Emitter
(2) Base
(3) Collector

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−40	—	—	V	I_C = −100 μA
Collector-emitter breakdown voltage	BV_{CEO}	−40	—	—	V	I_C = −1mA
Emitter-base breakdown voltage	BV_{EBO}	−5	—	—	V	I_E = −100 μA
Collector cutoff current	I_{CBO}	—	—	−0.1	μA	V_{CB} = −35V
Emitter cutoff current	I_{EBO}	—	—	−0.1	μA	V_{EB} = −5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	−0.4	V	I_C/I_B = −150mA/−15mA
		—	—	−0.75		I_C/I_B = −500mA/−50mA
Base-emitter saturation voltage	$V_{BE(sat)}$	−0.75	—	−0.95	V	I_C/I_B = −150mA/−15mA
		—	—	−1.3		I_C/I_B = −500mA/−50mA
DC current transfer ratio	h_{FE}	30	—	—	—	V_{CE} = −1V , I_C = −0.1mA
		60	—	—		V_{CE} = −1V , I_C = −1mA
		100	—	—		V_{CE} = −1V , I_C = −10mA
		100	—	300		V_{CE} = −1V , I_C = −150mA
		20	—	—		V_{CE} = −2V , I_C = −500mA
Gain bandwidth product	f_T	200	—	—	MHz	V_{CE} = −10V , I_E = 20mA, f=100MHz
Collector output capacitance	Cob	—	—	8.5	pF	V_{CB} = −10V , f=100kHz
Emitter input capacitance	Cib	—	—	30	pF	V_{EB} = −0.5V , f=100kHz
Delay time	td	—	—	15	ns	V_{CC} = −30V , $V_{EB(OFF)}$ = −2V , I_C = −150mA , I_{B1} = −15mA
Rise time	tr	—	—	20	ns	V_{CC} = −30V , $V_{EB(OFF)}$ = −2V , I_C = −150mA , I_{B1} = −15mA
Storage time	tstg	—	—	225	ns	V_{CC} = −30V , I_C = −150mA , I_{B1} = $-I_{B2}$ = −15mA
Fall time	tf	—	—	30	ns	V_{CC} = −30V , I_C = −150mA , I_{B1} = $-I_{B2}$ = −15mA

●Electrical characteristic curves

The electrical characteristic curves for these products are the same as those of UMT2907A, SST2907A, MMST2907A and PN2907A.
Refer to pages 598 to 601.

(SPEC-A31)