

SOT-23 TRANSISTORS (continued)

Switching Transistors

The following tables are a listing of devices intended for high-speed, low saturation voltage, switching applications. These devices have very fast switching times and low output capacitance for optimized switching performance.

Pinout: 1-Base, 2-Emitter, 3-Collector

Devices are listed in order of descending f_T

Device	Marking	Switching Time (ns)		$V_{(BR)CEO}$	$h_{FE} @ I_C$			f_T MHz Min
		t_{on}	t_{off}		Min	Max	mA	
NPN								
MMBT2369LT1	M1J	12	18	15	20	—	100	—
BSV52LT1	B2	12	18	12	40	120	10	400
PNP								
MMBT3640LT1	2J	25	35	12	20	—	50	500

VHF/UHF Amplifiers, Mixers, Oscillators

The following table is a listing of devices intended for small-signal RF amplifier applications to VHF/UHF frequencies. These devices may also be used as VHF/UHF oscillators and mixers.

Pinout: 1-Base, 2-Emitter, 3-Collector

Device	Marking	$V_{(BR)CEO}$	$C_{cb}^{(2)}$ pF Max	$f_T @ I_C$	
				GHz Min	mA
NPN					
MMBTH10LT1	3EM	25	0.7	0.65	4.0
MMBT918LT1	M3B	15	1.7 ⁽¹⁾	0.6	4.0
MMBTH24LT1	M3A	30	0.45	0.4	8.0
PNP					
MMBTH81LT1	3D	20	0.85	0.6	5.0
MMBTH69LT1	M3J	15	0.35 ⁽²⁾	2.0	10

⁽¹⁾ C_{ob}

⁽²⁾ C_{re}

Choppers

The following table is a listing of small-signal devices intended for chopper applications where a higher than normal $V_{(BR)CEO}$ is required in the circuit application.

Pinout: 1-Base, 2-Emitter, 3-Collector

Device	Marking	$V_{(BR)CEO}$	$V_{(BR)EBO}$	$h_{FE} @ I_C$		
				Min	Max	mA
PNP						
MMBT404ALT1	2N	35	25	30	400	12

See Packaging Information under Technical Data Section for reel size, quantity and ordering information.

Devices listed in bold, italic are Motorola preferred devices.