

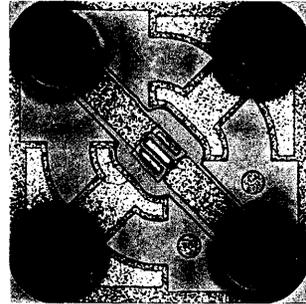
# MMCF3250, MMCF3250A (SILICON) MMCF3251, MMCF3251A

## FLIP-CHIP PNP SWITCH AND AMPLIFIER TRANSISTORS

Flip-Chip – PNP silicon Annular transistor family for high-speed switching and amplifier applications similar to the 2N3250,A and 2N3251,A.

**Primary Electrical Features:**

- High speed switching characteristics similar to 2N3251.



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### MAXIMUM RATINGS

Rating	Symbol	MMCF3250 MMCF3251	MMCF3250A MMCF3251A	Unit
Collector-Emitter Voltage	$V_{CEO}$	40	60	Vdc
Collector-Base Voltage	$V_{CB}$	50	60	Vdc
Emitter-Base Voltage	$V_{EB}$	5.0		Vdc
Collector Current – Continuous	$I_C$	200		mAdc

MMCF3250, MMCF3250A, MMCF3251, MMCF3251A (continued)

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

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Breakdown Voltage ( $I_C = 10\text{ mAdc}$ , $I_B = 0$ ) MMCF3250, MMCF3251 MMCF3250A, MMCF3251A	$BV_{CEO}$	40 60	— —	Vdc
Collector-Base Breakdown Voltage ( $I_C = 10\ \mu\text{Adc}$ , $I_E = 0$ ) MMCF3250, MMCF3251 MMCF3250A, MMCF3251A	$BV_{CBO}$	50 60	— —	Vdc
Emitter-Base Breakdown Voltage ( $I_E = 10\ \mu\text{Adc}$ , $I_C = 0$ )	$BV_{EBO}$	5.0	—	Vdc
Collector Cutoff Current ( $V_{CB} = 40\text{ Vdc}$ , $I_E = 0$ )	$I_{CBO}$	—	20	nAdc
<b>ON CHARACTERISTICS</b>				
DC Current Gain ( $I_C = 0.1\text{ mAdc}$ , $V_{CE} = 1.0\text{ Vdc}$ ) MMCF3250,A MMCF3251,A	$h_{FE}$	40 80	— —	—
( $I_C = 1.0\text{ mAdc}$ , $V_{CE} = 1.0\text{ Vdc}$ ) MMCF3250,A MMCF3251,A		45 90	— —	
( $I_C = 10\text{ mAdc}$ , $V_{CE} = 1.0\text{ Vdc}$ ) MMCF3250,A MMCF3251,A		50 100	150 300	
( $I_C = 50\text{ mAdc}$ , $V_{CE} = 1.0\text{ Vdc}$ ) MMCF3250,A MMCF3251,A		15 30	— —	
Collector-Emitter Saturation Voltage ( $I_C = 10\text{ mAdc}$ , $I_B = 1.0\text{ mAdc}$ )	$V_{CE(sat)}$	—	0.25	Vdc
Base-Emitter Saturation Voltage ( $I_C = 10\text{ mAdc}$ , $I_B = 1.0\text{ mAdc}$ )	$V_{BE(sat)}$	—	0.9	Vdc
<b>DYNAMIC CHARACTERISTICS</b>				
Current-Gain-Bandwidth Product ( $I_C = 10\text{ mAdc}$ , $V_{CE} = 20\text{ Vdc}$ , $f = 100\text{ MHz}$ ) MMCF3250,A MMCF3251,A	$f_T$	250 300	— —	MHz
Output Capacitance ( $V_{CB} = 10\text{ Vdc}$ , $I_E = 0$ , $f = 100\text{ kHz}$ )	$C_{ob}$	—	6.0	pF

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