

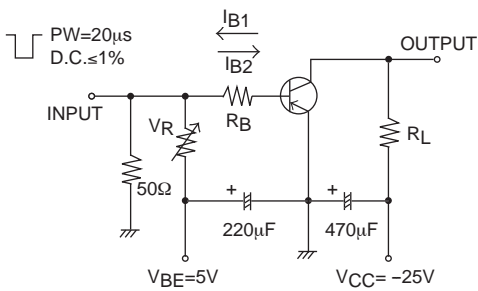


# 50A02MH

## Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0\text{A}$			-100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -4\text{V}, I_C = 0\text{A}$			-100	nA
DC Current Gain	$h_{FE}$	$V_{CE} = -2\text{V}, I_C = -10\text{mA}$	200		500	
Gain-Bandwidth Product	$f_T$	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$		690		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		3.8		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-60	-120	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-0.9	-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0\text{A}$	-50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0\text{A}$	-5			V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		30		ns
Storage Time	$t_{stg}$			170		ns
Fall Time	$t_f$			30		ns

## Switching Time Test Circuit

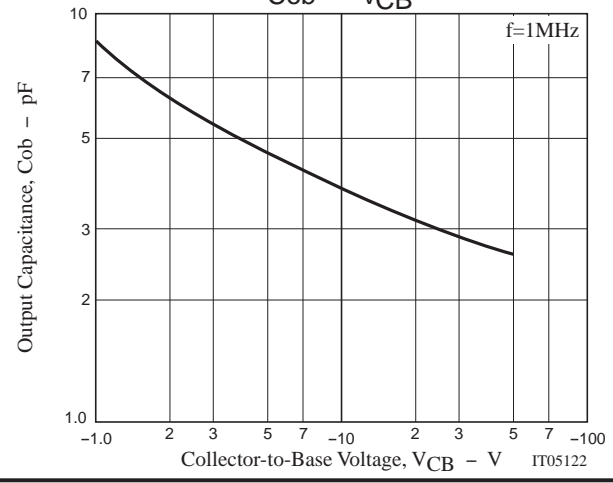
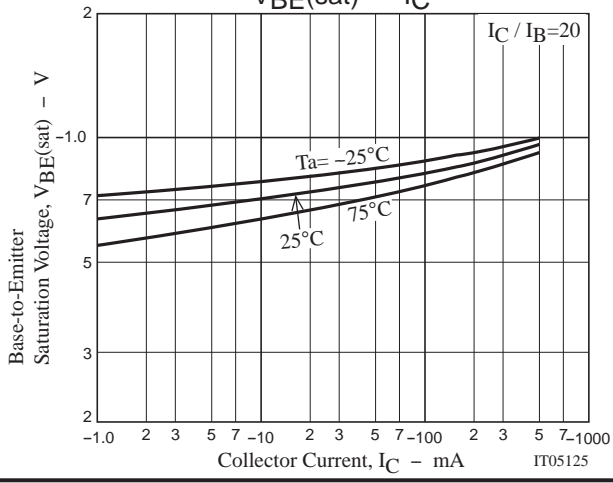
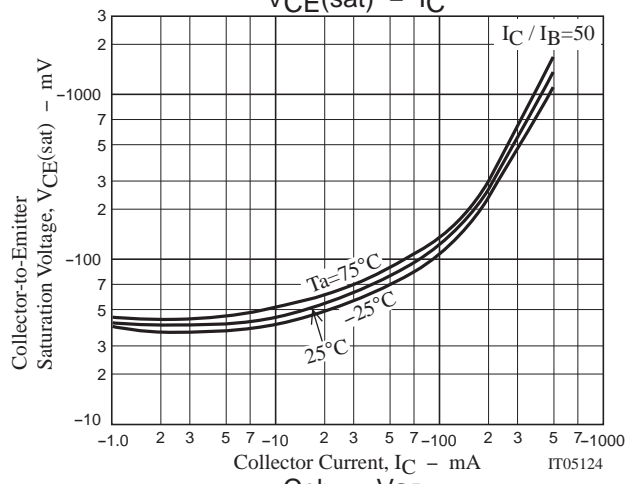
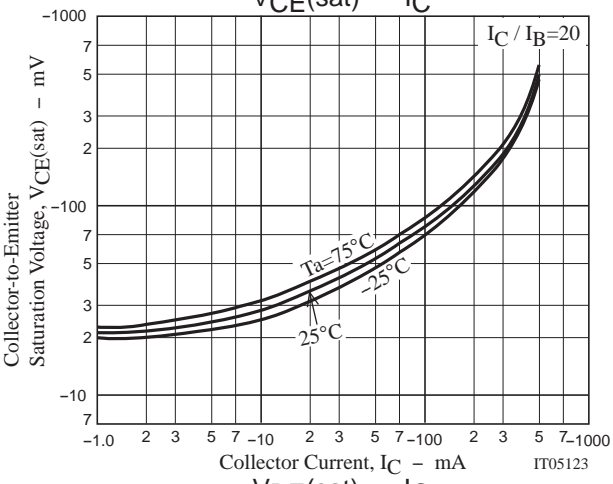
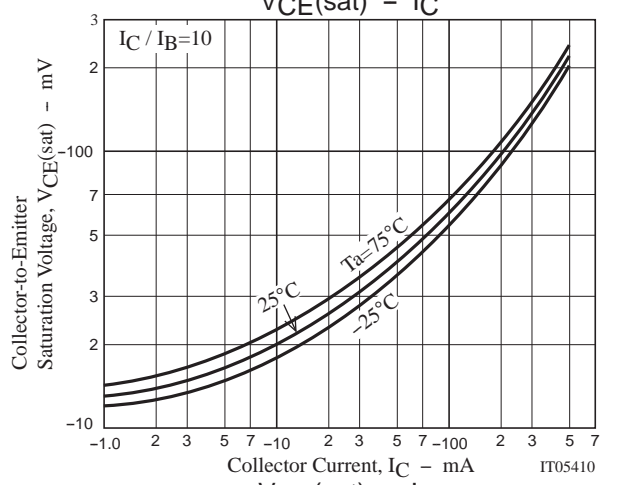
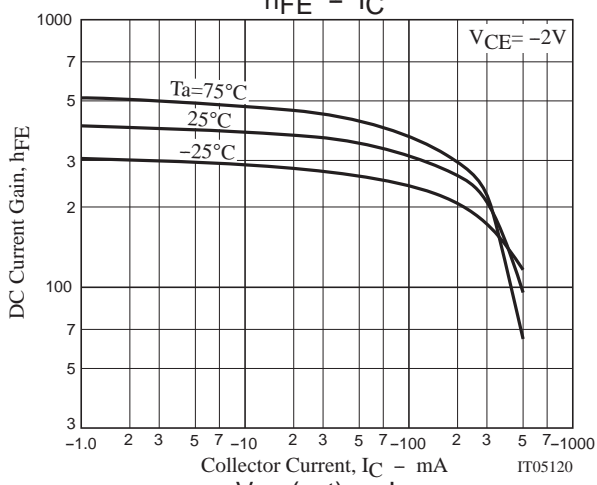
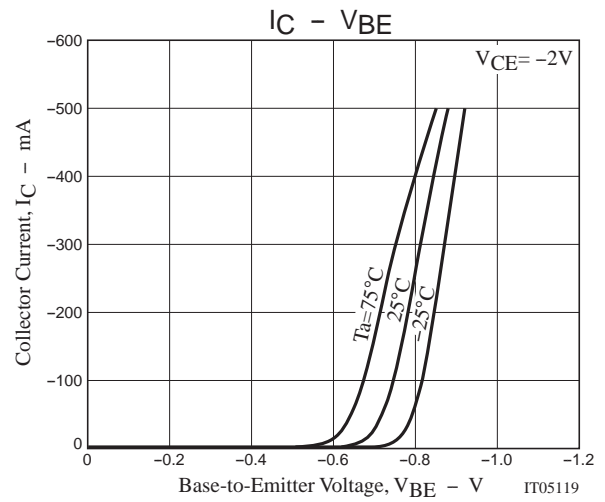
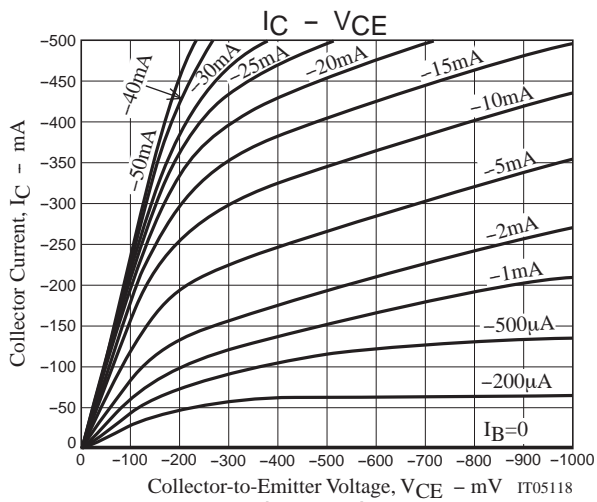


$$I_C = 20I_{B1} = -20I_{B2} = -200\text{mA}$$

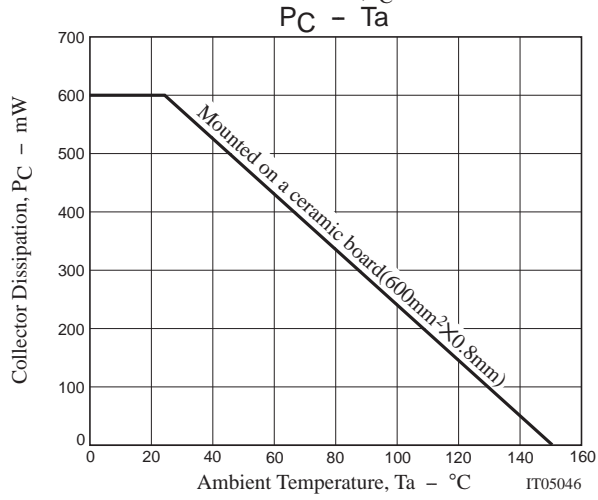
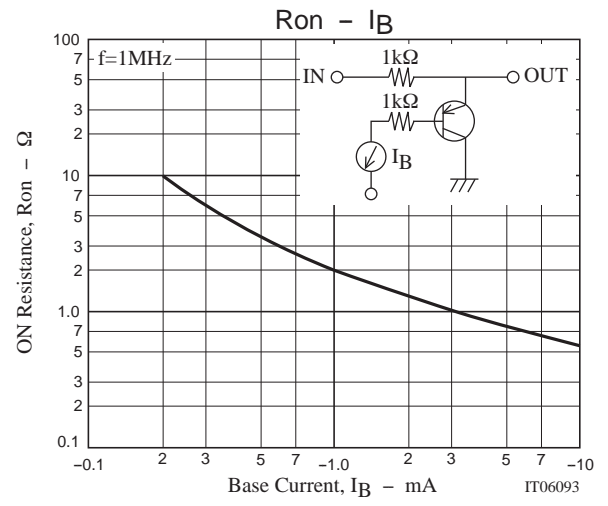
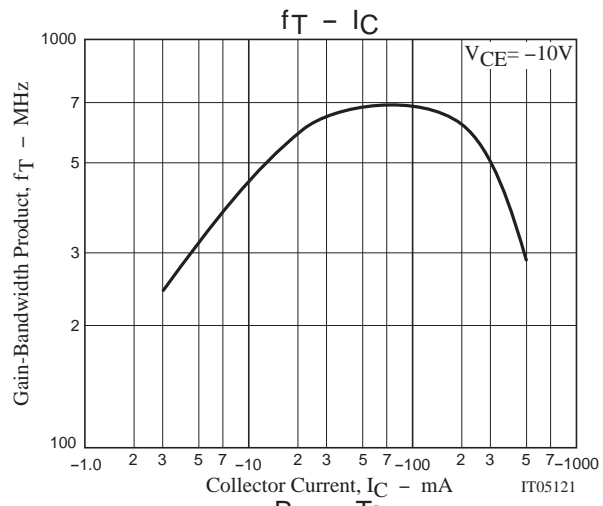
## Ordering Information

Device	Package	Shipping	memo
50A02MH-TL-E	MCPH3	3,000pcs./reel	Pb Free

# 50A02MH



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Embossed Taping Specification

50A02MH-TL-E

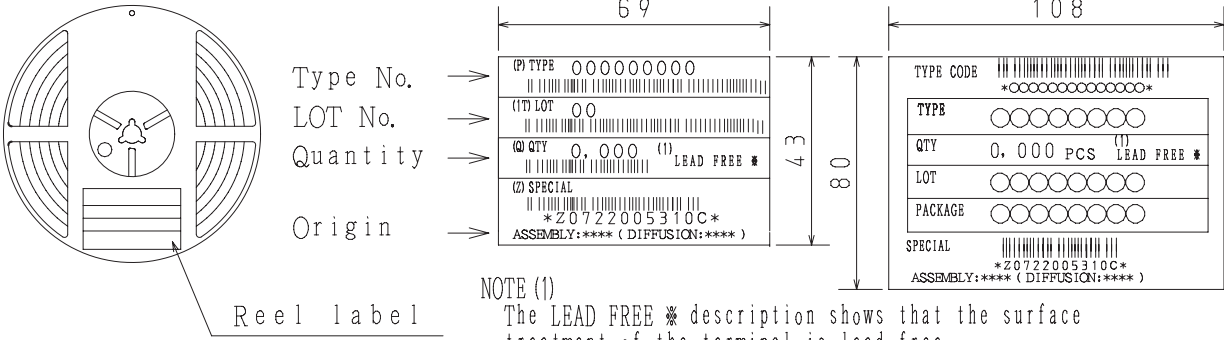
1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCPH3	MCPH3	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method

Reel label, Inner box label (unit:mm)

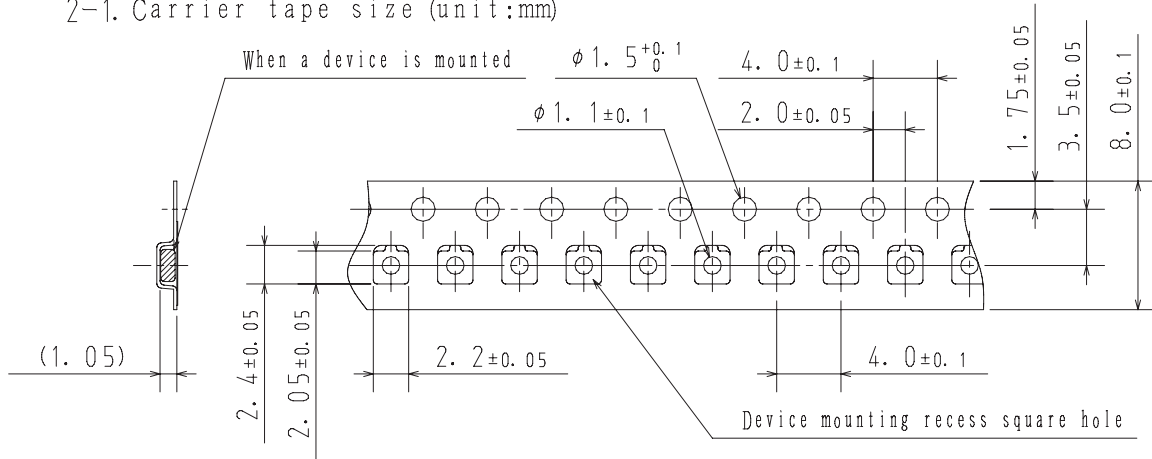
Outer box label  
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.



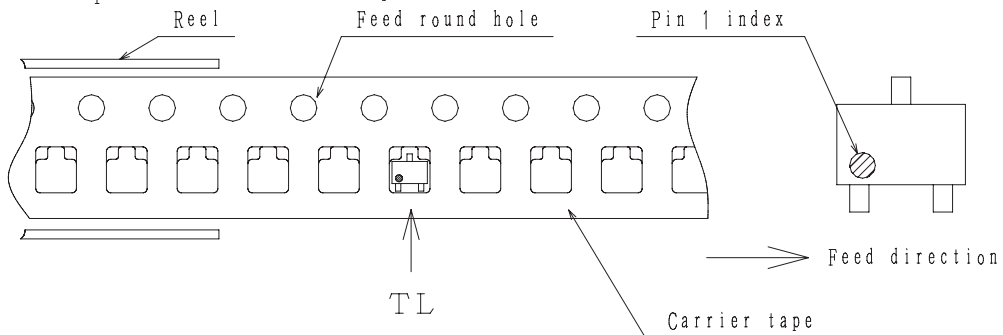
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



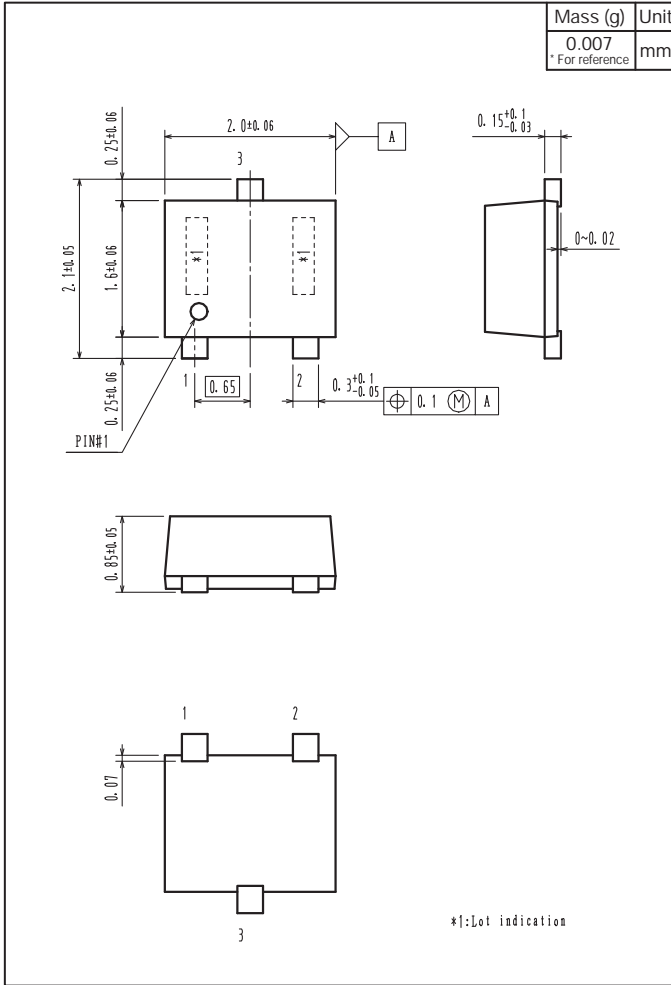
2-2. Device placement direction



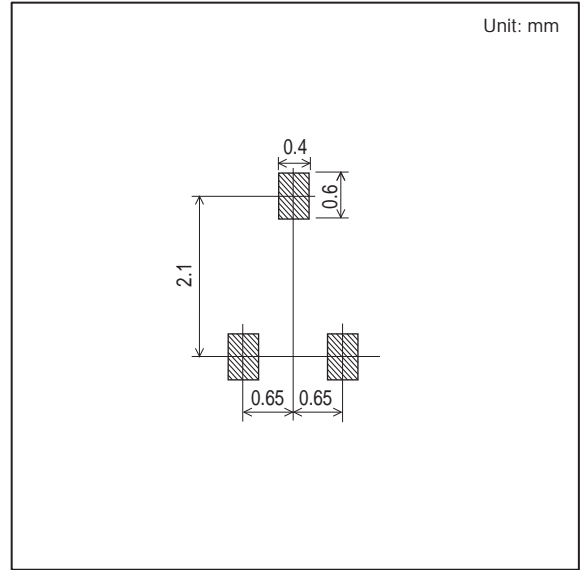
Those with pin 1 index on the feed hole side.....TL

# 50A02MH

## Outline Drawing 50A02MH-TL-E



## Land Pattern Example



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