

/ Descriptions

TO-252 c d d e f g h i 6 j `

N-Channel Enhancement Mode Field Effect Transistor in a TO-252 Plastic Package.

/ Features

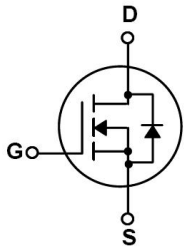
@ A B C D E F G H I O k l ; < `

/ Applications

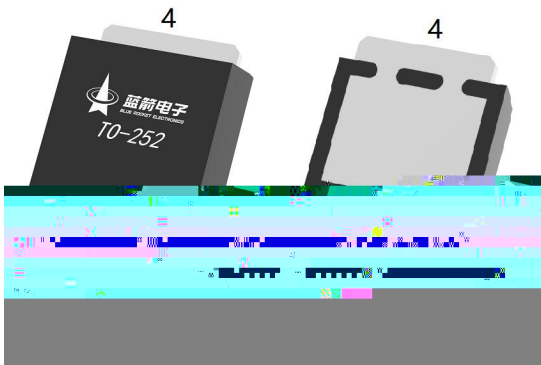
m n o p i q r s t 7 u v w 7 x O K L 9 : 6 7 i M' H I `

DC/DC Converters in Computing, Suitable for general purpose, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1_ G

PIN 2_ D

PIN 3_ S

PIN 4_ D

/ Marking

y P Q z { ` See Marking Instructions.



Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Drain Current	$I_D(T_C=25^\circ C)$	67	A
Drain Current - Pulsed	I_{DM}	140	A
Gate-Source Voltage	V_{GS}	± 20	V
Energy		185	mJ
			A

Power Dissipation

BRCS060N03DPQ

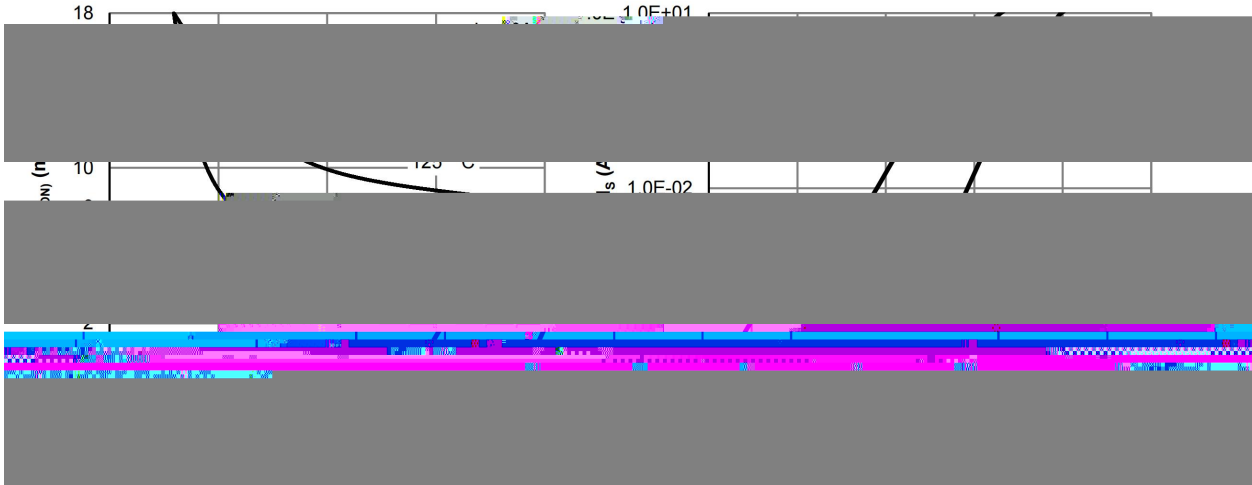
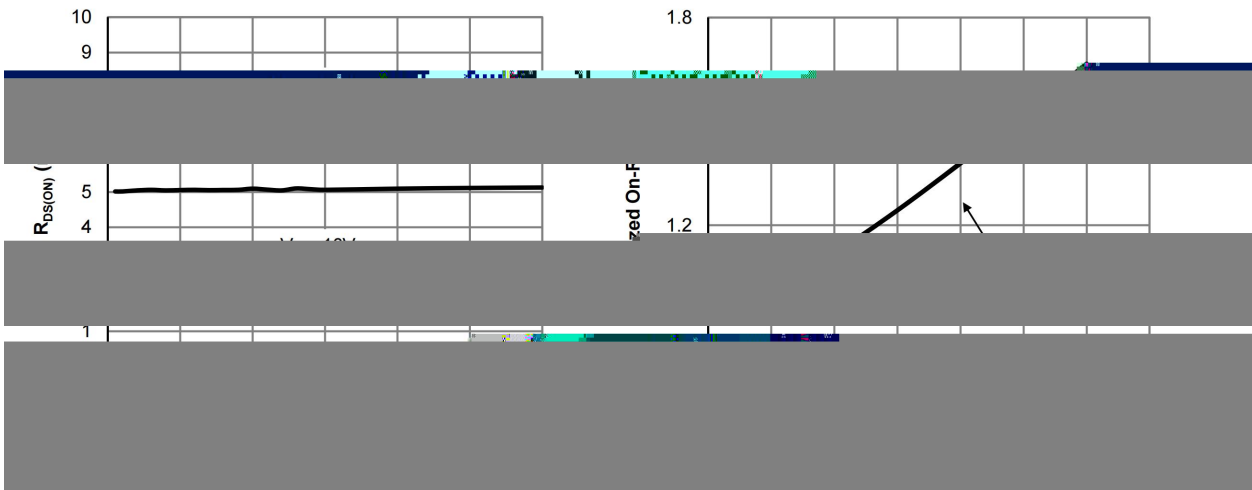
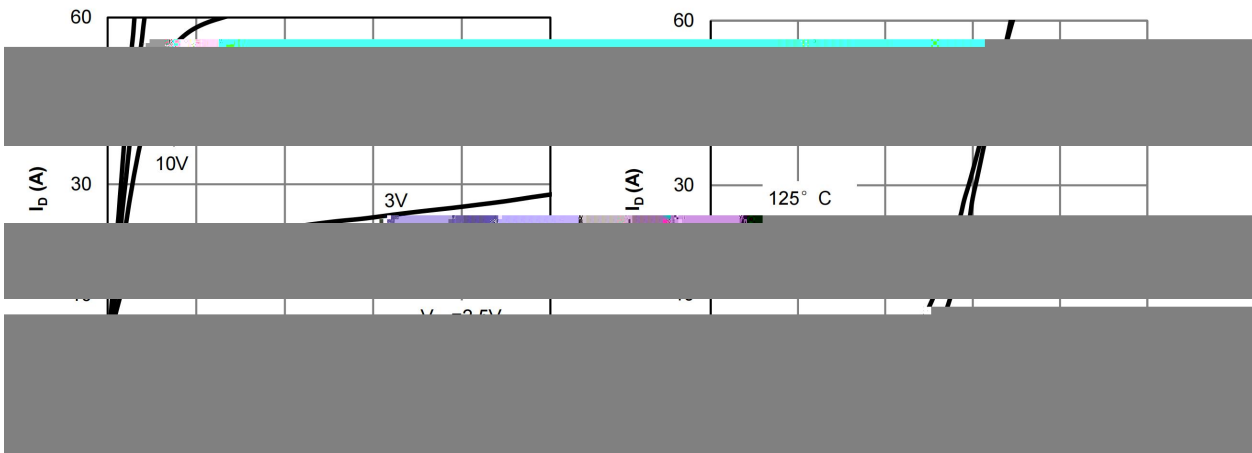
Rev.A Jun.-2022



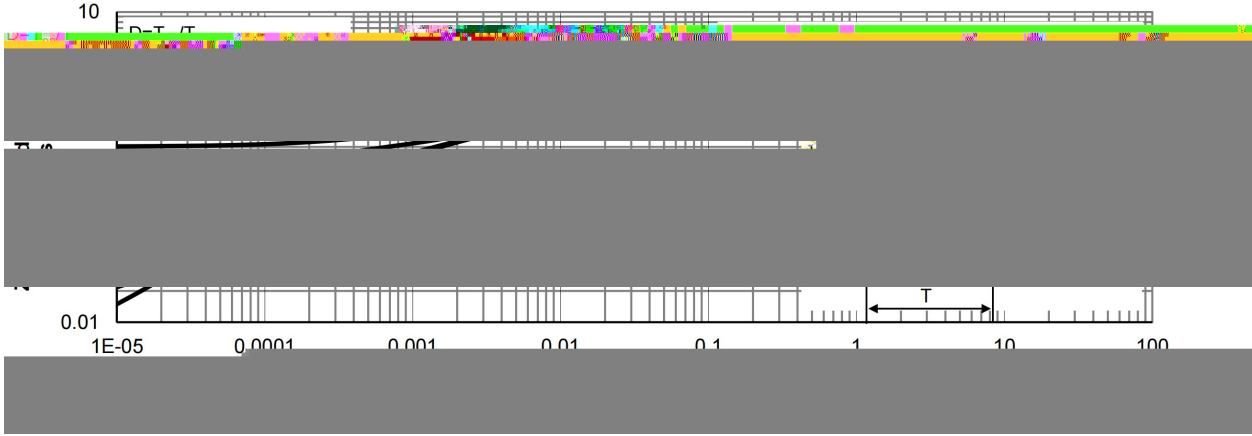
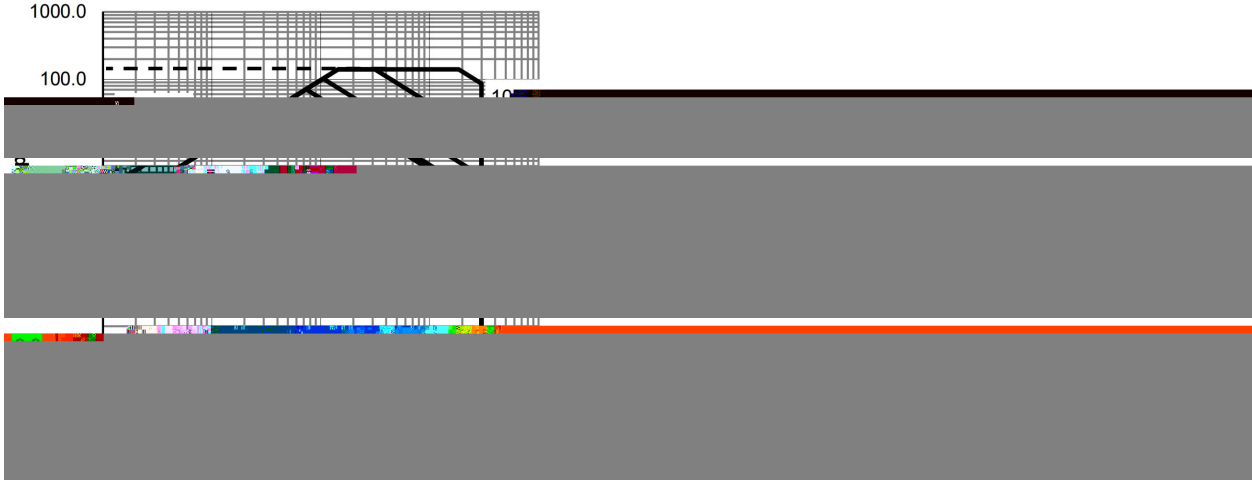
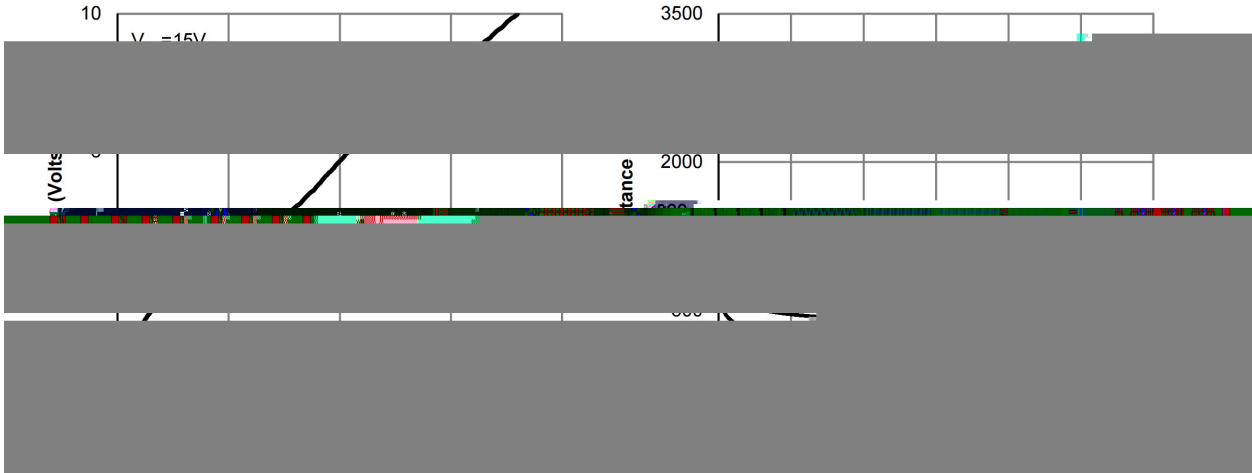
DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ 				

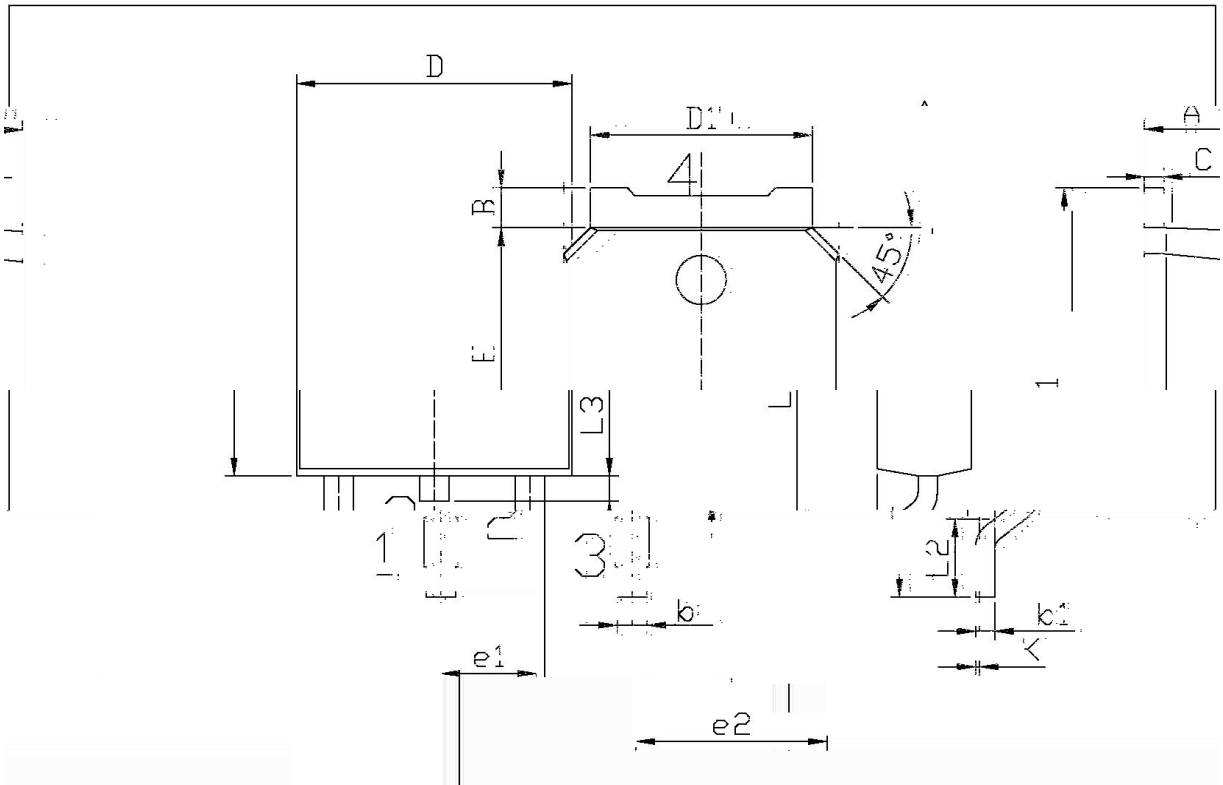
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions

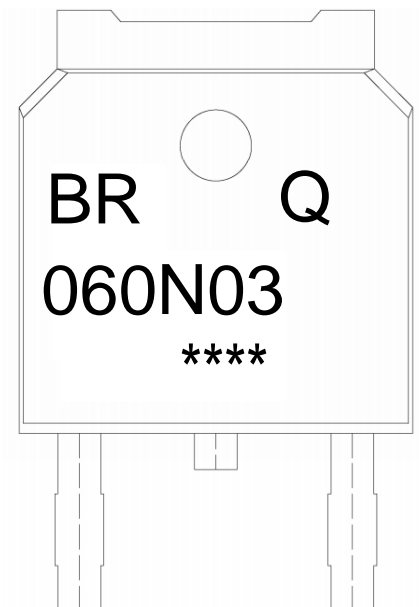


单位: mm

Dimension in Millimeters				Dimension in Millimeters			
Symbol	Min	Max	Symbol	Min	Max	Symbol	Min
e	5.95	6.25	A	2.20	2.54	L2	0.45
e1	2.24	2.32	B	0.95	1.2	D	6.45
e2	4.40	4.75	b	0.50	0.60	L3	0.60
L1	9.85	10.35	b'	0.50	0.60	L2	0.55
L2	0.55	0.70	e	5.95	6.25	L3	0.60
L3	0.60	0.70	e1	2.24	2.32	L2	0.55
L4	0.60	0.70	e2	4.40	4.75	L3	0.60
L5	0.60	0.70	L1	9.85	10.35	L4	0.60
L6	0.60	0.70	L2	0.55	0.70	L5	0.60
L7	0.60	0.70	L3	0.60	0.70	L6	0.60
L8	0.60	0.70	L4	0.60	0.70	L7	0.60
L9	0.60	0.70	L5	0.60	0.70	L8	0.60
L10	0.60	0.70	L6	0.60	0.70	L9	0.60
L11	0.60	0.70	L7	0.60	0.70	L10	0.60
L12	0.60	0.70	L8	0.60	0.70	L11	0.60
L13	0.60	0.70	L9	0.60	0.70	L12	0.60
L14	0.60	0.70	L10	0.60	0.70	L13	0.60
L15	0.60	0.70	L11	0.60	0.70	L14	0.60
L16	0.60	0.70	L12	0.60	0.70	L15	0.60
L17	0.60	0.70	L13	0.60	0.70	L16	0.60
L18	0.60	0.70	L14	0.60	0.70	L17	0.60
L19	0.60	0.70	L15	0.60	0.70	L18	0.60
L20	0.60	0.70	L16	0.60	0.70	L19	0.60
L21	0.60	0.70	L17	0.60	0.70	L20	0.60
L22	0.60	0.70	L18	0.60	0.70	L21	0.60
L23	0.60	0.70	L19	0.60	0.70	L22	0.60
L24	0.60	0.70	L20	0.60	0.70	L23	0.60
L25	0.60	0.70	L21	0.60	0.70	L24	0.60
L26	0.60	0.70	L22	0.60	0.70	L25	0.60
L27	0.60	0.70	L23	0.60	0.70	L26	0.60
L28	0.60	0.70	L24	0.60	0.70	L27	0.60
L29	0.60	0.70	L25	0.60	0.70	L28	0.60
L30	0.60	0.70	L26	0.60	0.70	L29	0.60
L31	0.60	0.70	L27	0.60	0.70	L30	0.60
L32	0.60	0.70	L28	0.60	0.70	L31	0.60
L33	0.60	0.70	L29	0.60	0.70	L32	0.60
L34	0.60	0.70	L30	0.60	0.70	L33	0.60
L35	0.60	0.70	L31	0.60	0.70	L34	0.60
L36	0.60	0.70	L32	0.60	0.70	L35	0.60
L37	0.60	0.70	L33	0.60	0.70	L36	0.60
L38	0.60	0.70	L34	0.60	0.70	L37	0.60
L39	0.60	0.70	L35	0.60	0.70	L38	0.60
L40	0.60	0.70	L36	0.60	0.70	L39	0.60
L41	0.60	0.70	L37	0.60	0.70	L40	0.60
L42	0.60	0.70	L38	0.60	0.70	L41	0.60
L43	0.60	0.70	L39	0.60	0.70	L42	0.60
L44	0.60	0.70	L40	0.60	0.70	L43	0.60
L45	0.60	0.70	L41	0.60	0.70	L44	0.60
L46	0.60	0.70	L42	0.60	0.70	L45	0.60
L47	0.60	0.70	L43	0.60	0.70	L46	0.60
L48	0.60	0.70	L44	0.60	0.70	L47	0.60
L49	0.60	0.70	L45	0.60	0.70	L48	0.60
L50	0.60	0.70	L46	0.60	0.70	L49	0.60
L51	0.60	0.70	L47	0.60	0.70	L50	0.60
L52	0.60	0.70	L48	0.60	0.70	L51	0.60
L53	0.60	0.70	L49	0.60	0.70	L52	0.60
L54	0.60	0.70	L50	0.60	0.70	L53	0.60
L55	0.60	0.70	L51	0.60	0.70	L54	0.60
L56	0.60	0.70	L52	0.60	0.70	L55	0.60
L57	0.60	0.70	L53	0.60	0.70	L56	0.60
L58	0.60	0.70	L54	0.60	0.70	L57	0.60
L59	0.60	0.70	L55	0.60	0.70	L58	0.60
L60	0.60	0.70	L56	0.60	0.70	L59	0.60
L61	0.60	0.70	L57	0.60	0.70	L60	0.60
L62	0.60	0.70	L58	0.60	0.70	L61	0.60
L63	0.60	0.70	L59	0.60	0.70	L62	0.60
L64	0.60	0.70	L60	0.60	0.70	L63	0.60
L65	0.60	0.70	L61	0.60	0.70	L64	0.60
L66	0.60	0.70	L62	0.60	0.70	L65	0.60
L67	0.60	0.70	L63	0.60	0.70	L66	0.60
L68	0.60	0.70	L64	0.60	0.70	L67	0.60
L69	0.60	0.70	L65	0.60	0.70	L68	0.60
L70	0.60	0.70	L66	0.60	0.70	L69	0.60
L71	0.60	0.70	L67	0.60	0.70	L70	0.60
L72	0.60	0.70	L68	0.60	0.70	L71	0.60
L73	0.60	0.70	L69	0.60	0.70	L72	0.60
L74	0.60	0.70	L70	0.60	0.70	L73	0.60
L75	0.60	0.70	L71	0.60	0.70	L74	0.60
L76	0.60	0.70	L72	0.60	0.70	L75	0.60
L77	0.60	0.70	L73	0.60	0.70	L76	0.60
L78	0.60	0.70	L74	0.60	0.70	L77	0.60
L79	0.60	0.70	L75	0.60	0.70	L78	0.60
L80	0.60	0.70	L76	0.60	0.70	L79	0.60
L81	0.60	0.70	L77	0.60	0.70	L80	0.60
L82	0.60	0.70	L78	0.60	0.70	L81	0.60
L83	0.60	0.70	L79	0.60	0.70	L82	0.60
L84	0.60	0.70	L80	0.60	0.70	L83	0.60
L85	0.60	0.70	L81	0.60	0.70	L84	0.60
L86	0.60	0.70	L82	0.60	0.70	L85	0.60
L87	0.60	0.70	L83	0.60	0.70	L86	0.60
L88	0.60	0.70	L84	0.60	0.70	L87	0.60
L89	0.60	0.70	L85	0.60	0.70	L88	0.60
L90	0.60	0.70	L86	0.60	0.70	L89	0.60
L91	0.60	0.70	L87	0.60	0.70	L90	0.60
L92	0.60	0.70	L88	0.60	0.70	L91	0.60
L93	0.60	0.70	L89	0.60	0.70	L92	0.60
L94	0.60	0.70	L90	0.60	0.70	L93	0.60
L95	0.60	0.70	L91	0.60	0.70	L94	0.60
L96	0.60	0.70	L92	0.60	0.70	L95	0.60
L97	0.60	0.70	L93	0.60	0.70	L96	0.60
L98	0.60	0.70	L94	0.60	0.70	L97	0.60
L99	0.60	0.70	L95	0.60	0.70	L98	0.60
L100	0.60	0.70	L96	0.60	0.70	L99	0.60

T0-252

/ Marking Instructions



BR

Q

060N03

Note:

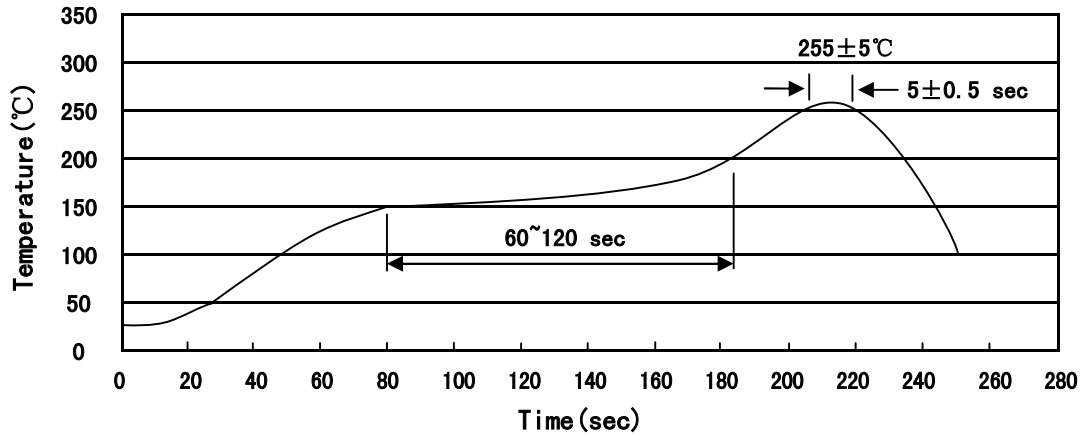
BR: Company Code

Q: Automobile halogen-free product Code

060N03: Product Type Code

****: Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1 150 200 60 120sec; 1.Preheating:150~200°C, Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
- 3 2 10°C/sec. 3. Cooling Speed: 2~10°C/sec.

/ Resistance to Soldering Heat Test Conditions

260±5°C 10±1 sec. Temp.:260±5°C Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13" ×16	360×360×50	380×335×366

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices