

NOTICE

Ref Nr: LR-20161228

Date: 2016.12.28

TO: All customers

FROM: Leaded-R Quality Assurance Dept.

HEREWITH YOU ARE INFORMED OF BELOW.

DESCRIPTION:

1. 因原材料供貨因素，FRM 系列已不再生產，全面改用特性規格更高階之FKN系列。
FRM series is phased out due to raw material discontinued, alternative one is FKN series with superior characteristics.
2. 生效日期：自2017年7月1日起生效。
Effective date: from Jul.1, 2017.
3. FRM & FKN 比較

Comparison table of FRM and FKN:

Series	FRM	FKN	Comparison
	Fusible Metal Film Resistors	Fusible Wirewound Resistors	
Power Range	1/4W~3W	1/4W~7W	FKN is with wider power range
Function	Safety function to protect circuit board	Safety function to protect circuit board	Same function
Resistance Element	Metal Film	Alloy Wire	Different technics
TCR	±200 ppm /°C	±300 ppm /°C (Standard, low T.C.R is on request)	FKN is flexible for customized requirement
Resistance Range	1Ω~560Ω	0.1Ω~1KΩ	FKN Series is with wider resistance range
Fusing Characteristics	1Ω ≤ R ≤ 2.0Ω Fusing time within 30 seconds at 25 times of rated power R ≥ 2.2Ω Fusing time within 30 seconds at 16 times of rated power	R ≤ 2.0 Ω Fusing time within 60 seconds at 36 times of rated power; R > 2.0 Ω Fusing time within 60 seconds at 25 times of rated power;	FRM cut off with shorter time at the same conditions. See attached table
Surge Voltage	Low	High (on request)	FKN is capable to withstand higher surge voltage at the same conditions. Detail as comparison table
Load Life	Common	Excellent	FKN performs better in Load Life stability.

Yageo PN	Fusing Time and Surge withstanding Voltage difference at the same conditions.						
	Power / Value	Fusing Test Method	Appraise	Fusing Voltage	current	Fusing time	surge Voltage
FRM3WSJT-73-1R	3W / 1R	25 times of rated power	within 30s	8.66V	8.66A	2.5s~4.7s	400V
FKN3WSJT-73-1R	3W / 1R	25 times of rated power	within 60s	8.66V	8.66A	21s~24s	1KV
FRM3WSJT-73-22R	3W / 22R	25 times of rated power	within 30s	40.6V	1.85A	0.7s~1.5s	500V
FKN3WSJT-73-22R	3W / 22R	25 times of rated power	within 60s	40.6V	1.85A	12s~15s	1.5KV

NOTICE

SUGGESTION FOR ALTERNATIVE PRODUCTS: Not applicable

Quality Manager	Product Manager	Sales Manager
Signature: Nane. Zhou.	Signature: Flora Shen	Signature: Ken Hsu
Date: Sep.22,2016 Dec. 28, 2016	Date: Dec. 28, 2016	Date: Dec. 28, 2016

FOR MORE INFORMATION, CONTACT: Flora Shen e-mail: flora.shen@yageo.com

RETURN YOUR COMMENTS BEFORE: **Jan.31, 2017**

Remarks:

Comments

Date: Dec. 28, 2016

Function: Marketing

Signature: Ken Hsu
